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Educational, financial, and social needs of families of children with multiple disabilities in Saudi Arabia.

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By

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DEDICATION

This dissertation is dedicated to the souls of my loving parents, my father—Abdulrahman Alkohaiz—who passed away in 1988, and my mother—Sarah Alkhonain—who passed away in 2009.

To my loving wife, Hebah Alradi; this dissertation could not have been completed without your love and understanding. Thank you for your patience, sacrifice, and your ongoing encouragement and support. Your encouragement has pushed me to work hard to finish this dissertation as soon as I could.

To my brother, Khalid Alkohaiz, who has surrounded me with his support, sincere prayers, and positive thinking toward others throughout my doctoral studies.

To my sister's husband, Saleh Al-Askar, who has encouraged me to pursue my dreams.

To my sister Jawaher, my sister Hanan, my brother Husain, and rest of my entire family.

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ABSTRACT

EDUCATIONAL, FINANCIAL, AND SOCIAL NEEDS OF FAMILIES OF CHILDREN WITH MULTIPLE DISABILITIES IN SAUDI ARABIA

Mohammed Abdulrahman Alkohaiz

March 21, 2018

Studies on the needs of families of children with multiple disabilities are few and limited, and none of these studies have been conducted in the Arab world, in general, nor in Saudi Arabia, in particular. Even though many families suffer from problems that affect their needs and the needs of their children with disabilities, social work research in the Arab world have not focused on the families and their needs. The information collected from such research can help in developing new and superior services to help children with multiple disabilities and their families. Thus, the present study will contribute to a better understanding of the needs of families of children with multiple disabilities and will help to fill the gap in the literature.

The purpose of this dissertation was to identify the families' educational, financial, and social needs, and to explore the differences in needs among families based on the parents' demographic information (i.e., educational backgrounds and financial status) and the children's characteristics (i.e., type of disability, gender of the child).

Using a questionnaire, the data for this study were collected between May 2016 and September 2016 from 196 fathers and mothers (98 couples) of children with multiple disabilities (male and female, between 5 and 18 years of age) enrolled in multiple-disability programs from 10 institutes each supervised through the Ministry

of Education in Riyadh, Saudi Arabia. The data were analyzed using the Statistical Package for the Social Sciences (IBM SPSS-22). Descriptive statistics were used to ascertain the sample description. In addition, one-way ANOVA and two-way ANOVA were used for answer research questions.

Generally, parents reported that families' needs are still falling short of being fulfilled in Saudi Arabia. Moreover, there was a significant difference between parents' gender regarding social needs; mothers reported a stronger need for social support than did fathers. Thus, the results suggest that the perceived social needs of the mothers are more important to them than the perceived education and financial needs. Moreover, the educational needs based on the parent's level of education was significant with the mothers who had high school diploma. The financial needs based on the interaction between parents' gender and child's gender was significant in favor of fathers with female children. Finally, the educational needs based on a child's type of disability was significant for both parents when the child had both deafness and another type of disability.

This exploratory research study served to extend research related to social work with families, social work with special groups, as well as provide further support for this specialized field of social work practice.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

PROBLEM STATEMENT

Introduction

Disability is a factor that people cannot ignore since it affects individuals from the family level to the global level. This is especially true in developing countries, including Saudi Arabia, where services for disabled individuals are still in the development phases. Disabled individuals face a myriad of challenges, including misconceptions, mistreatment, and disparagement by other members of society (Hibbard, Desch, the Committee on Child Abuse and Neglect, & Council on Children with Disabilities Pediatrics, 2007; Van Huijgevoort, 2002). Some countries mark disabled people as outsiders, and do not allow them to apply for entry.

The complex interaction between a health condition and environmental and personal factors means that each child's experience of disability is unique. Therefore, the experience of the family is unique, too. While many children throughout the world have a single disability, others may experience multiple disabilities. For instance, a child may suffer from an intellectual disability accompanied by blindness or by a physical disability; children with Cerebral Palsy may also have Down syndrome, a visual disability, or an intellectual disability. Thus, disability is a broad and complex concept, and it substantially regulates a person's major life activities (Fuchs & Fuchs, 1998; Ministry of Education of Saudi Arabia, 2008). Many disabilities take the form of behavioral problems (O'Mea, 2013) and several studies around the world have revealed that children who suffer from multiple disabilities have more behavioral and emotional problems than those with single impairments (Alimovic, 2013; Kaptein, Jan

sen, Vogels, & Reijneveld, 2008; Lindblad, Gillberg & Fernell, 2011). Although these studies have been helpful for caregivers, none of these studies consider the population of individuals with multiple disabilities in Saudi Arabia.

Numerous studies have verified that children with multiple disabilities experience problems that children without disabilities do not experience (Koppenhaver, Hendrix & Williams, 2007). Further, studies reveal that these children are vulnerable to repeated, unpleasant, and painful experiences that they cannot control (Chen, 2014). Except for a few studies in western countries, studies have not focused on the families' needs (e.g., Lindsay, King, Klassen, Esses, & Stachel, 2012; McConkey, Nixon, Donaghy, & Mulhern, 2004). Moreover, most individuals, or children or parents of children with multiple disabilities have limited access to vital information about their condition or available services (Hibbard et al., 2007). Others may exhibit low levels of participation during family activities (Axelsson, Granlund & Wilder, 2013). Some children may require assistive technologies, which are subject to barriers (Copley & Ziviani, 2004), such as using chin movements to operate microswitches, the "technical tools designed to help persons with multiple disabilities control their immediate environment with simple responses" (Lancioni et al., 2006, p.291). Others need to be under the care of a single or multiple caregivers whose successful interactions can boost the child's development (Hibbard et al., 2007; Wilder & Granlund, 2003). Many methods for taking care of disabled persons have emerged, including team-based approaches (Fitzgerald, Ryan, & Fitzgerald, 2015) and family-centered care (Barnard-Brak, Stevens, & Carpenter, 2017; Kuhlthau et al., 2011; King & Chiarello, 2014). Since appropriate services add to the possibility of individual's sustainable care, quality relationships, and cost-effectiveness (Mansell,

2010) the lack of these services for families in Saudi Arabia contributes to the problem of caring for a child with multiple disabilities.

It is imperative for those who work with children with multiple disabilities, especially social workers who work with families or with special groups, to understand what it means to have multiple disabilities and to understand the special characteristics of such children and their families. Having a deep understanding of each child is a fundamental step for social workers in order to meet the support needs of the child, and the many needs of the child's parents. These disabled children are each different in terms of ability, personality, family background, and interests. For example, some children with disabilities have greater abilities than other children and their abilities may be similar to those of healthy individuals (Mednick, 2007). Moreover, strategies and tools that produce the most positive results for one child may not be effective for another child. Thus, persons who care for individuals with multiple disabilities have reported more problems than persons who care for people with a single disability (Kyzar, Turnbull, Summers, & Gomez, 2012).

The success of programs and services for children with multiple disabilities depends on a combination of factors, including family participation. In his study on children who suffer from autism, Trigonaki (2002) stated that the families of children with disabilities have needs that are linked to the needs of their children and the availability of resources including educational, financial, and social support. These supports are only effective when the basic needs of the family have been determined. According to Bailey and Simeonsson (1988), the most important needs of parents of disabled children are the need for information, the need for support, the need for communicating with other people in their society, the need for community services and financial assistance, and then the needs associated with family functioning.

Research helps to establish the unique characteristics, strengths, weaknesses, and needs of these children and their families to inform policy and strategy. Saudi Arabian families with children with multiple disabilities find themselves at a disadvantage compared to similar families in other countries because there is no research focusing on their educational, financial, and social needs. Consequently, families and caregivers facing raising a child with multiple disabilities should seek external help since the more disabilities a child has, the more severe the problem (Hardman, Drew, & Egan, 2005). In Saudi Arabia, not only is there no research, but the definitions of "multiple disability" vary among legislative agencies established to support the children and their families. This disagreement about how to define multiple disabilities is based upon who is using the term and in what context.

As mentioned previously, studies that identify the needs of the family of a disabled child are rare and limited. Moreover, the research has not addressed the needs of families of children with multiple disabilities in the Arab world, in general, or in Saudi Arabia, in particular, despite the high number of disabled individuals in Saudi Arabia, as seen in Table 1.

Table 1

Demographics of Saudi Arabia, 2010 and 2016

	2010*	2016**
Population (total)	27,236,156	31,742,308
Male	15,531,471	18,233,964
Female	11,704,685	13,508,344
Saudi Citizen	18,776,510	20,064,970
Male	9,575,257	10,225,650
Female	9,201,253	9,839,320
Saudi Population with Disability	170,217	667,280
Saudi Male with Disability	101,515	390,454

Saudi Female with Disability	68,702	276,826
Saudi Population with Disability (5-19 years of age)	56,682	175,951
Saudi Male with Disability (5-19 years of age)	32,511	99,167
Saudi Female with Disability (5-19 years of age)	24,171	76,784

* Source: Central Department of Statistics and Information (2010). *Population and Housing, Detailed results of Census 2010.* Available from https://www.stats.gov.sa/en/13 (Accessed 17 December 2017).
** Source: General Authority for Statistics in Saudi Arabia, (2016a) *Demography Survey*, Available from https://www.stats.gov.sa/ar/4522 , (Accessed 17 December 2017).

Research Problem

According to Hendriks, De Moor, Oud, and Franken (2000):

> "Three reasons for studying the needs of parents are typically cited: (1) general service planning or attuning the supply of institutional care to the parents' demands; (2) efficient family support implementation by the formulation of service needs in collaboration with the parents instead of only by the professional caregivers; and (3) pre-intervention measurement for reliable outcome evaluation at the end of the intervention period." (p. 507)

In the last few decades, the concerns and priorities of Saudi families have changed due to the transformation in the country's socio-economic status. These changes include the need for Saudi women to work in order to manage the new style of living in Saudi Arabia. Consequently, working families often find it difficult to provide appropriate care for their disabled children (Al rubiyea, 2010). Based on the collected research, many opportunities exist to develop detailed information and data about disabled children and their families in Saudi Arabia. Since the literature has revealed that there is a lack of knowledge about children with multiple disabilities and their families in Saudi Arabia (Al Otaibi & Al Sartawi, 2012), comprehensive research is needed to fill this gap. According to Al-Mutair, Plummer, Clerehan, and

O'Brien, (2014a, 2014b), no such study has been conducted, and no studies have focused on recognizing the family needs relative to the cultural values and religious beliefs held by family members. Moreover, Alazemi (2010) suggested that the Saudi governmental authority needs to provide effective program models and support services for disabled children's families to improve their quality of life. According to Al-Krenawi and Graham (2000), social workers in the Arab world typically focused on the children with disabilities and their needs without paying attention to the family and their needs. Many families suffer from economic problems, which affect the ability to meet and address the complex of their needs and their disabled children needs.

There are significant opportunities to conduct research about the nature, incidence, and effect of multiple disabilities on Saudi society. This research is important for meeting the needs of families of children with multiple disabilities, which means identifying the needs of their children that can result in the development of new and more effective services. Thus, one question guides the direction of this study: What are the most important perceived needs of families of children with multiple disabilities in Saudi Arabia?

This investigation is needed because measuring parents' perspectives, based on their demographics (e.g., education background, and financial status), has not been studied sufficiently. Specifically, investigating the issues that relate to the parents' perceptions can allow service providers to identify any obstacles that reduce the ability of the families to meet their needs and their children's needs. Finally, the findings of this study may be used to promote awareness and an understanding of the needs of families, Saudi and non-Saudi, of children with multiple disabilities in Saudi Arabian society.

Purpose of the Study

The research purpose of this study is to identify the educational, financial, and social needs of the families of children with multiple disabilities in Saudi Arabia. This study also explores differences in need among families based on parents' demographics (parents' gender, education background, and financial status) and the characteristics of the children with multiple disabilities (type of disability, gender).

Research Questions

To fulfill the aim of the research, the following questions were addressed in the study:

1. What are the perceived educational needs of the families (fathers and mothers) of children with multiple disabilities?
2. What are the perceived financial needs of the families (fathers and mothers) of children with multiple disabilities?
3. What are the perceived social needs of families (fathers and mothers) of children with multiple disabilities?
4. Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary based on the parents' gender, parents' level of education, and parents' monthly income?
5. Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary based on the child's gender, and child's disability type?

Definitions of the Study Terms

Needs: Sahay et al. (2013) has provided a comprehensive definition of needs:

> Needs has been defined as the basic requirement expressed by an individual for survival. Basic needs are food, shelter, and clothes. However, for survival

in society, needs expressed by an individual or families are social support, informative needs, financial needs, childcare needs, and professional support and community services. (p.1)

Therefore, *needs* include assistance that families require to ensure that their child/children with multiple disabilities can enjoy an acceptable quality of life in his/her family and society. In this study, needs include the educational, financial, and social needs that a family tries to satisfy.

Family*:* Family refers to a social unit comprised of parents and children (Nour, 2005). The term *family,* as used in this study, includes parents and the immediate members of the extended family who are involved in caring for children with multiple disabilities.

Children with Multiple Disabilities*:* Bigge, Best, and Heller (2001) defined multiple disabilities as having "two or more disabilities whose combination results in severe educational problems due to the interaction effects of the disabilities." (p. 92) Children with multiple disabilities suffer from various health conditions and are limited in many functional areas, including communication, mobility, and adaptive living (Erin & Spungin, 2004). For the most part, those affected suffer a combination of movement difficulties, emotional or behavior disorders, and/or sensory loss (Rotatori, Bakken, Burkhardt, Obiakor, & Sharma, 2014; Cook, 2001). The term *Children with Multiple Disabilities,* as used in this study, includes three types of children with multiple disabilities: 1) children with intellectual disability and another type of disability; 2) children with blindness and another type of disability; and 3) children with deafness and another type of disability.

Delimitations of the Study

The following are the current study's delimitations:

1. The study is limited to investigating families of children with multiple disabilities (both male and female) who are enrolled in special education institutions under the supervision of the Ministry of Education in Saudi Arabia. Therefore, the results of this study may not be the same for families of children with multiple disabilities in general classroom settings or those educated in the home.
2. The study was restricted to investigating families of children with multiple disabilities in Riyadh, Saudi Arabia. Collecting data from the entire Kingdom of Saudi Arabia was not feasible due to the size of the country and time limitations. This does not mean that other regions are not relevant for future study, but the results of this study may not apply to other countries.
3. The study's method of data collection was a questionnaire, which has limitations. This method relies on the participants' honesty in self-reporting, and their responses are dependent upon the presentation of questions.
4. Since the researcher could not find literature about Saudi Arabia or a neighboring country regarding the needs of families of children with multiple disabilities, most of the literature was gathered from Western sources, including the United States and other industrialized countries.

Structure of the Dissertation

The dissertation consists of five chapters:

- Chapter One: Problem Statement. The introductory chapter provides definitions of the key terms, discussion of the central research questions, and an outline of the contents of each chapter.

- Chapter Two: Literature Review. The chapter reviews the relevant literature and scholarly debates, with particular reference to developmental ethics.
- Chapter Three: Methodology. The epistemological approach and logic of the research method is set forth in this chapter. Matters of data validity are discussed including sampling strategy and data collection techniques. Challenges, risks and ethical considerations concerning data collection and limitations to data availability are discussed in detail.
- Chapter Four: Results. The chapter answers the research questions in light of the evidence collected from the questionnaire.
- Chapter Five: Discussion. This chapter summarizes the conclusions of the research, defines where and how it has contributed to the literature, and presents the new research that has emerged.

CHAPTER II

LITERATURE REVIEW

Introduction

A systematic review of empirical and non-empirical analysis has been performed on articles and studies written in English and Arabic languages by master and doctoral studies. Additionally, the review includes searches conducted in Saudi Digital Library (SDL), PsycINFO, MEDLINE, ERIC, tables of contents of social work journals, reference lists of identified articles, JSTOR, EBSCO Host, Social Work Abstracts, Google Scholar, OVID, and Social Work Abstract Plus databases. Consequently, many keywords were selected based on the keywords and terms used in published studies, as well as unpublished studies. The researcher reviewed all keywords to select the final string keywords, then searched the databases by using the following: “multiple disabilities,” “multiple handicapped,” “disabled children,” “severe disabilities,” “Saudi disabled,” “family need,” and “Saudi families” to identify relevant literature. The researcher assessed the quality of the studies by evaluating their methodology, study questions, and results. Due to the lack of studies about children with multiple disabilities or about families of children with multiple disabilities, and because the researcher wanted to include all the studies related to the topic no studies that matched the search criteria were omitted from the literature review.

While the goals of social work studies focused on this population include observing and interviewing disabled children in order to understand them and meet their needs and their families' needs without causing harm, the studies have been

limited in scope. As a result, the studies are valuable, but do not address the population and needs of families to the extent that is necessary to meet complex needs. Globally, most social work studies focused on disability in general, or on a single disability; only a few studies concentrated on multiple disabilities in children (e.g., Hefny, 2001), and no single study looked at social work, and the needs of the families, and children with multiple disabilities simultaneously. The perceptions of parents caring for children with multiple disabilities were more pronounced in Saudi Arabia because research on multiple disabilities is very rare. This is true for a number of reasons. Most of social work studies in Saudi Arabia concentrated on a single type of disability (e.g., Zamzami, 2005; Alotaibi, 2006; and Kashrami, 2003), and there was not adequate data or information about the incidence and frequency of disability.

Also, there was a lack of relevant studies that focus on disability including children with multiple disabilities (Kisioglu, Uskun, & Ozturk, 2003), and furthermore, families of disabled children are often unwilling to allow their children to participate in research (Al-Gain & Al-Abdulwahab, 2002; Elsheikh & Alqurashi, 2013; Shawky, Abalkhail, & Soliman, 2002). There are several reasons for this finding including: the families did not recognize their child as a disabled child, and from the interviews between the researcher and families of children with multiple disabilities during the data collection phase, parents stated that the previous research not bring about changes for the families, or their child, and the families felt that participating was a wasted effort if their comments did not amount to help through resources. In Saudi Arabia, disability has been defined as a health problem (Alquraini, 2011; Ministry of Health in Saudi Arabia, 2018; Ministers' Council Proceedings U.S.C., 2000). For this reason, studies conducted on individuals with specific health problems played a significant part in determining the experiences and needs of those

under study. As a result, the lack of relevant studies, and lack of participation by families, provides many opportunities for researchers to add to and improve the value of social work research about the needs of the families of children with multiple disabilities in Saudi Arabia.

Background about Saudi Arabia

Given the limited number of studies focusing on parents caring for children with multiple disabilities in Saudi Arabia, it is essential for western researchers to understand the customs and mores of Saudi Arabian society in order to understand the need for additional literature and social work research among the targeted population.

General Background

Saudi Arabia is located in the southwest part of the Arabian Peninsula and borders Jordan, Iraq, and Kuwait in the north and Bahrain, United Arab Emirates, Qatar, and the Arabian Gulf on the east. Oman and Yemen are to the south, and the Red Sea lies to the west. According to the Central Department of Statistics and Information (2010), the 2010 census was the last census data of population in Saudi Arabia. The population of Saudi Arabia was approximately 27.3 million and the population of Saudi citizen with disabilities was around 170 thousand, as see in Table 1. About 65% of the population was concentrated in the regions of Riyadh, Makkah, and the Eastern Province (Al-Jadid, 2013).

Saudi Arabia has a varied topography, which includes mountains, plains, and deserts. The temperatures fluctuate from 120°F during the day to well below 30°F during an icy desert night (Al-hano, 2006). Riyadh, the capital of Saudi Arabia, is the country's largest city (Royal Embassy of Saudi Arabia in Washington, 2018; Alquraini, 2011) with approximately 38,000 Saudi citizens with a disability and 10,000 Non-Saudi citizens with disability (Central Department of Statistics and

Information, 2010). According to 2010 data, in the Middle East, Saudi Arabia ranked as one of the largest countries, occupying 2.25 million square kilometers and it is the largest country of the Arabic Gulf States; 80% of the Arabian Peninsula is occupied by Saudi Arabia. Saudi Arabia is the world's largest producer and exporter of oil (Berger, 2013; Almalki, Fitzgerald, & Clark, 2011).

Religion

Saudi Arabia is home to the two major Muslim holy cities—Mecca and Medina. Islam, the national religion of Saudi Arabia, is closely interwoven in all facets of Saudi life, including government, law, education, dress, marriage, and family's daily life. Likewise, accessing families of children who have multiple disabilities can be impacted by the religious practices of all citizens, and the various beliefs about disability. Saudi Arabia does not allow non-Muslims to become citizens and Saudis are not allowed to choose their religion—everyone must be Muslim (Long, 2005). When an infant is born, the first thing he/she should hear is the *athan*, the "call to prayer," which stamps the infant as Muslim. Although members of different religions, which include foreign workers, are not permitted to exercise their faith publicly, anyone may become a Muslim. All people are required to follow Islam and *Sharia law*. Saudi girls are taught how to wear *abayas* and the importance of dressing modestly (North & Tripp, 2006). Moreover, Saudi education is separated by gender related to religious roles, and religion occupies a significant portion of the curriculum at all levels.

Sharia law respects human rights and protects those with disabilities (Hemdi, 2010; Hanafi, 2007; Al-Gain & Al-Abdulwahab, 2002). Moreover, in religious terms, parents of a child with multiple disabilities have a duty to care of their child, and Islam stresses the duty of others to help and support parents and their children with

multiple disabilities. This teaching plays an important role in understanding how willing a Muslim family may be to interact with a social worker who wants to discuss the needs of caring for a child with multiple disabilities.

Family

Understanding the family unit assists researchers in identifying the best means to gather data and determine which individuals may be the most acceptable to the parents. The traditional Saudi family is an extended family unit comprising the husband, wife, children, and their married son/s with their wife/wives and children. This structure is still typical for families in Saudi rural areas (Alsaif, 1991), although the nuclear family is beginning to take precedence in urban areas. Even so, this adjustment in the family structure has diminished family ties and obligations (Alhammadi, 2000). The parents are responsible for the care of the children, who in turn bear a similar responsibility to their parents when they are older. All children are expected to live in their families' houses until they marry, and parents maintain financial responsibility until the children secure jobs (Long, 2005).

The Saudi family bonds are quite strong, and it is common to see two or three generations living in the same house. In the Saudi culture, it is dishonorable to place an elderly parent in a nursing home. To a large degree, families take responsible for their divorced, widowed, stranded, or disabled relatives (Alhammadi, 2000). Based on 2010 national statistics, the average number of children in a Saudi family was 5.8 (North & Tripp, 2012). The statistics show that 82.6% of the families in Saudi Arabia were nuclear families, which include the husband, wife, unmarried children, and the husband's parents if they don't have their own home (Alhammadi, 2000).

Due to these generational family ties and responsibilities in caring for elders as well as children in the same home, caring for a child with multiple disabilities places

additional stress on the family unit. The family assumes a dominant role in the life of the disabled child and has the most knowledge about his/her fundamental needs (Dubis, 1987). The additional responsibilities are based on the circumstances surrounding the disabled child; the family, the type of disability, and the child's gender, age, and stage of development. Therefore, a disabled child's parents and relatives are confronted with more challenges (Cook, 2004) and need different types of help. For example, material, moral, mental, and social assistance helps them cope with the child's disabilities and the burden that they may feel when dealing with the child's situation (Swadi & Eapen, 2000). According to Alsaif (1991), relatives in Saudi Arabia expect extraordinary steadfastness from one another and acknowledge familial commitments, which provides them with solidarity and personal identity. This tight community of caregivers, all related, can mean that the family is less likely to share the responsibility of care with individuals outside of the family unit. This can make the gathering of research from the families challenging.

Social Life

Not only are Saudi families close, but friendships create another circle of care for Saudi Arabian men and women. For this reason, the chance of sharing intimate family issues, such as caring for a child with multiple disabilities, may be limited. For some family units, close friendship enlarges the circle of who can be trusted. In Saudi Arabia, friendship is very important in a person's life. Friendship is seen as something good in itself, and relationships among friends takes priority over functional or work relationships. Since friendships often last a lifetime, it is normal to have different groups of friends, and most friendship patterns follow tribal affiliations that may be invisible to the outsider. In Saudi Arabia, it is accepted that friendship overrides a person's official duties.

Saudi men and women cannot mix in the same workplace. Female workers are concentrated in areas where they serve other women, such as nursing, teaching, or staffing women's banks, stores, universities, and medical clinics. By law, Saudi women were not allowed to drive—until June 2018—or to travel outside of Saudi Arabia without the express permission of their fathers or their husbands. Although changes are coming to Saudi Arabia, how these changes will impact families of children with multiple disabilities is unknown.

The Population of Disabled Children in Saudi Arabia

The prevalence of people with disabilities varies depending on the type of disability (Elsheikh & Alqurashi, 2013; Al-Jadid, 2013). The Central Department of Statistics and Information (2010) indicated that approximately 170,217, or nearly 0.9% of the total Saudi population, has at least one disability (see Table 1). Elsheikh and Alqurashi (2013) estimated the number of disabled population in Saudi Arabia to be 720,000 (4% of the total Saudi population) or 900,000 (more than 8% of the Saudi population). Of the total population, 3.73% people suffer from some sort of disability that limits their ability to perform day-to-day tasks (Al-hano, 2006). Thus, the numbers cited above about Saudi incidence of disability confirm that the numbers of disabled population in Saudi Arabia are not clear. As noted by Al-Gain and Al-Abdulwahab (2002), it is difficult to find reliable statistics on this subject; the government figures are significantly under-reported. Saudi scholars are almost unanimous in claiming a higher incidence of disability in Saudi society than in Western societies. This analysis assumes that the Saudi scholars' estimates are accurate.

The number of children with disabilities in Saudi Arabia is statistically significant. According to the Table 1, the number of Saudi children, 5 to 19-year-old,

with a disability had risen to nearly 210 % of the children's population from 56,682 children, in 2010 to 175,951 children, in 2016. The lack of current population data on the numbers, characteristics, and circumstances of disabled children in Saudi Arabia has given rise to concern by scholars and researchers. For example, Table 2 reflects the most current data available from the government, and it does not contain detailed information about children.

Table 2

Saudi Population with Disability by Type of Disability and Cause of Disability

Cause of Disability	Difficulty type						
	Seeing	Self-care	Hearing	Mobility	Memory and concentration (cognition)	Communication	Total
Congenital	83,269	2,831	20,416	92,150	8,613	22,434	229,713
During Pregnancy	7,769	282	2,720	14,516	810	3,660	29,757
During Delivery	21,298	1,746	6,269	27,840	348	6,654	64,155
Traffic Accident	11,704	238	5,052	19,069	1,720	884	38,667
Other Accident	15,073	670	4,012	10,450	2,708	3,906	36,819
Disease	89,430	3,840	36,932	81,832	9,104	24,770	245,908
Other	7,320	675	1,501	8,822	901	3,042	22,261
Total	235,863	10,282	76,902	254,679	24,204	65,350	667,280

Source General Authority for Statistics in Saudi Arabia, (2016a) *Demography Survey*, Available from https://www.stats.gov.sa/ar/4522 , (Accessed 17 December 2017).

Impact of Cultural Differences on the Way Disability is defined

Existing cultural differences among Saudi's generations have various impacts on the way that communities (informal systems) define disability and disabled individuals. Even though Saudi Arabia is governed by *sharia* laws that respect human rights and protect people with disabilities (Hemdi, 2010; Hanafi, 2007; Al-Gain and

Al-Abdulwahab, 2002; Al-Jadid, 2014), shared belief among some older Saudis may ascribe a child's disability to jinn possession (negative force resides in the body), or to divine punishment for a parents' mistakes. These belief systems affect the perception of disabilities in at least two ways. First, because of the moral dimension associated with disability, some families seek treatment in the religious community (consulting a *shaikh,* for example) rather than in the medical or social work systems. Second, there is the belief that it is hopeless to seek to change God's will, which may discourage parents from participating in efforts to help their child improve. Society often shuns Saudi Arabia's disabled individuals because they are considered an embarrassment to the able members of the family. When disabled individuals are forced to remain at home by their family, they have limited access to healthcare, employment, and education opportunities. According to Alhammadi (2000), since family issues are viewed as private, and not discussed with those outside the family, it is hard for caregivers (e.g., social workers, teachers, or policymakers) to give instructions about care for a disabled family member.

Providing special education to children with disabilities—including children with multiple disabilities—differs, based on the socioeconomic orientation of the parents and society's view of people with disabilities in Saudi Arabia (Al-Nahdi, 2007; Almoghyrah, 2015). The income levels greatly affect the approach employed by parents in educating children with multiple disabilities. Studies have found that wealthy Saudi families often send their children to be educated in other countries that offer special education services (e.g., Jordan or Egypt), where they remain in special educational institutes for most of their school years (Al-Mousa, 2008; Alquraini, 2010). The potential benefits of this arrangement include avoiding the aggravation of dealing with the bureaucracy and possible opportunities for the child in a new cultural

setting. While the negatives may include the cost of the institute, as well as the possibility of distancing the child from the family. Families typically visit their children once or twice a year when schooling is not within the family's town or village. Al rubiyea (2010) stated that "Saudi families prefer to send their children to a care agency rather than having someone in their home." (p. 182) because care agencies are limited in Saudi Arabia and these agencies more like non-educational housing that offers food, shelter, and educational resources.

Since shame encourages affluent families to send children abroad and poor families to lock them away, it is not surprising that many children with disabilities escape notice or classification. Further, when children do not live at home, they may not be reported on census forms. This commonplace reality allows the families and the government to largely ignore the existence of children with multiple disabilities. If, as stated by Lindsay, Tétrault, Desmaris, King, and Piérart (2014), families felt stigma and shame of having a child with a disability it is easy to understand why some families might send their children with disabilities abroad.

Defining Multiple Disabilities

The complex interaction between a health condition and environmental and personal factors indicates that each child experiences disability differently (Sahay et al., 2013). As such, disability is a broad and complex concept, and it regulates a substantial part of a person's major life activities (Fuchs & Fuchs, 1998; Ministry of Education of Saudi Arabia, 2008). On a statistical basis, 6.4% of disabled individuals in Saudi Arabia who are between 5 and 35 years of age suffer from multiple disabilities (Afeafe, 2000; Al-Gain and Al-Abdulwahab, 2002).

Obviously, defining disabilities implies that there should be a single, unambiguous definition throughout all public and private agencies of what constitutes

a child with multiple disabilities, and a well-defined process for identifying and placing such a child in appropriate intervention programs. Equally important is the need to identify potential obstacles that may prevent the child from achieving a life of dignity, and identify measures to overcome these obstacles. Generally, the more disabilities a child has, the more severe the problem he/she and his/her family have (Hardman et al., 2005).

It is essential to understand the meaning of multiple disabilities in order to grasp the concept of children who suffer from such problems. Children with multiple disabilities suffer from several health conditions and have limitations in many functional areas including communication, mobility, and adaptive living (Erin & Spungin, 2004). Such children may be unable to read or write, and be unable to communicate using spoken, written, or sign language. Children with multiple disabilities may also suffer from conditions that are difficult to evaluate, such as learning disabilities and emotional disorders (Erin & Spungin, 2004). Most of them rely on the predictability of their routines to make sense of the world around them.

Before considering the challenges of defining multiple disabilities using criteria from Saudi Arabia, it is helpful to consider the definition referenced by Colker (2011), in the United States Code, *Title 20 U.S.C. 1401(3) (A) (2006)*:

> The term 'child with a disability' means a child either, (i) with mental disability, hearing problems (including deafness), speech or language disabilities, visual impairments (including blindness), serious emotional disturbance (referred to in this chapter as emotional disturbance), autism, brain injury, and specific learning disabilities (ii) who, by reason thereof, requires special education and other relevant services. (p. 82)

Regardless of the country of origin, the common disabilities of children with multiple disabilities include visual problems (blindness and low vision), interaction problems, communication problems, attentiveness problems, intellectual problems, motor problems, sensory problems, autism spectrum disorders, learning difficulties, and limited behavior repertoire (Argyropoulos & Thymakis, 2014; Axelsson, 2015; Campaña & Ouimet, 2015; Cascella, 2014; Lancioni et al., 2014; Munde, Vlaskamp, Maes, & Ruijssenaars, 2014; Ramani, Police, & Jacob, 2014; Schlaeger et al., 2014; Vlaskamp, Hiemstra, Wiersma, & Zijlstra, 2007; Vlaskamp & Nakken, 2008). Some researchers (Bigge, Best, & Heller, 2001; Chen, 2014) include cerebral palsy as a common symptom among children with multiple disabilities. Thus, a child with cerebral palsy may also have Down syndrome, a visual disability, or an intellectual disability.

Children with multiple disabilities, such as a combination of visual impairment and motor disabilities, have problems in processing sufficient information (Schlaeger et al., 2014; Colasent, 2002). They are unable to learn independently or use information in an effective manner (Schlaeger et al., 2014). People with multiple disabilities—including children—may have serious occupational problems (Gentry, Lau, Molinelli, Fallen & Kriner, 2012; Mechling, Gast, & Seid, 2010; Lancioni, O'Reilly, Seedhouse, Furniss, & Cunha, 2000). They may have difficulties in performing intricate activities and require extra instructional help to perform activities in an orderly manner (Chan, Lambdin, Van Laarhoven, & Johnson, 2013; Lang, Regester, Rispoli, Pimentel, & Camargo, 2010). These individuals may also fail to perform their duties unless someone reminds them (Gillespie, Best, & O'Neill, 2012).

Children who suffer from multiple disabilities need appropriate attention because of their special needs. Although persons with disabilities share many

similarities with most able people, children with multiple disabilities may have specific problems associated with their medical condition and may develop unique methods of coping with their problems (Mednick, 2007). Some of the critical factors for such children include environmental, social, adaptation, participation, and mental considerations (Chen, 2014). Moreover, given the complex nature of the situation, a single child may require the services of different specialists in speech, language, visual impairment, occupational therapy, music therapy, physical therapy, behavior, health, education, mobility, and orientation (Orita et al., 2012; Chen, 2014). The parents of such disabled children may also have several service needs (Hendriks, De Moor, Oud, and Franken, 2000). Multiple disabilities in children lead to critical needs, some of which cannot be accommodated in special education programs that are meant for single-impairment students (Nour, 2005).

Special Characteristics of Children with Multiple Disabilities

It is imperative for those working with children with multiple disabilities to understand what it means to have multiple disabilities and the special characteristics of such children. Each child with multiple disabilities is unique and has unique needs (Sahay et al., 2013). Such children differ in terms of ability, personality, family background, and interests. In any given region, some have greater abilities than others, and their abilities may be similar to those of healthy individuals (Mednick, 2007). Furthermore, strategies and tools that produce the best results for one child may not be effective for another. Moreover, having doctors who are specialists addressing the specific needs of such children does not always guarantee that these recommendations will be adopted. Persons who care for individuals with multiple disabilities have reported more problems (e.g., finding community care, finding trained and reliable home care providers, having enough money to pay for care, and

getting enough rest) than persons who care for people with single disabilities (Anderson, Larson, & Wuorio, 2011). Therefore, understanding each child is a fundamental step in assessing his or her needs. Adding to the body of research is important because it helps establish the unique characteristics, strengths, weaknesses, and requirements of these children and their families. For Saudi Arabia, census-descriptive information about the educational, financial, and social needs of families of children with multiple disabilities would be helpful to inform policy and develop strategies designed for the multiple disability population.

Multidimensional impairments limit the lives of individuals and their families by affecting their capability to function optimally in society. People with multiple impairments have concomitant health problems, meaning that they suffer from disabilities that occur simultaneously. For instance, a child may suffer from an intellectual disability accompanied by blindness or by a physical disability. Many disabilities are manifested in the form of behavioral problems (O'Mea, 2013) and several studies reveal that children who suffer from multiple disabilities have more behavioral and emotional problems than those with single impairments (Alimovic, 2013; Kaptein et al., 2008; Lindblad et al., 2011).

Children with multiple disabilities have challenging educational needs as compared to people without multiple disabilities; a student with multiple disabilities may not learn in a special class for other students with only one disability (Colasent, 2002). The implication is that families will require more resources to take care of students with multiple disabilities. As defined by the Ministry of Health for purposes of deciding how and where to educate disabled children, students with multiple disabilities are those who have either cerebral palsy or mental retardation in addition

to at least one other disability, such as visual or auditory deficits, movement disabilities, or behavioral disorders (Ministry of Health in Saudi Arabia, 2018).

In dealing with families with a child with multiple disabilities, much attention has focused on the delivery of health care services (Hatton, Emerson, Robertson, Henderson, & Cooper, 1995; Robertson, Hatton, Baines, & Emerson, 2015; Carnaby, 2007), while education and training have received less attention (Petitpierre, Wolf, Dietrich, Benz, & Adler, 2007). The Saudi government has been trying to ensure that there are legal provisions aimed at protecting the needs of children with disabilities and confirming that their rights to education, health, and social welfare are met. This is being accomplished by enacting laws to increase the quality of special education services and create public awareness about education for children with different types of disabilities (Ministry of Education of Saudi Arabia, 2002 as cited in Battal, 2016). The solution is less helpful when looking at children with multiple disabilities, who may have increased difficulty learning in regular special education classes (Colasent, 2002). Some impairments limit the children's interaction with their peers and their resulting isolation leads to poor grades (Cross, Traub, Hutter-Pishgahi, & Shelton, 2004; Downing & Peckham-Hardin, 2007). Children with mental disabilities need extraordinary consideration to overcome social, educational, and physical issues (Al-Jadid, 2014). As children with multiple disabilities age, the burden of caring for them increases (Aldosari & Pufpaff, 2014). For instance, dressing and carrying for older and bigger children becomes more demanding for the parents as they, themselves age.

Services for Children with Multiple Disabilities in Saudi Arabia

The rapidly growing population of disabled children has placed a strain on the government's available resources, due to inadequate technological advancement to address emerging disability problems (e.g., offering services and regulating providers)

in Arabic society including Saudi Arabia (Al-Wabli, 1996). The Kingdom of Saudi Arabia started to focus on people with disabilities in 1958, when the government initiated a social and economic development plan that provided welfare for people with disabilities (Alquraini, 2010). The primary purpose was to provide help to individuals with disabilities, taking measures to meet their intellectual, psychological, physical, and economic needs. The measures emphasized human rights and specifically, upholds the rights of people with disabilities and empowers them to live a dignified life.

Since the Saudi government has clearly articulated the belief that every individual has the right to a dignified life, it should achieve that goal by requiring that services be provided to children with multiple disabilities and their families. In Saudi Arabia, services for the disabled have received much attention during the past 15 years (Alnahdi, 2013). This increased attention is reflected in the increasing amount of services that have been offered, including those targeting children with multiple disabilities and their families. Although health care services have been addressed, education and training services have received less attention. As stipulated by Saudi law, persons with multiple disabilities have the right to free education, healthcare, and basic needs. The legislation of disability (LD), passed and enacted in 1987, served as the first, and one of the core legislations to address the needs of people with disabilities and give them equal rights (Alquraini, 2011). Key to the provision was a clear definition of disabilities and of the entitlement of people with disabilities (Prince Salman Center for Disability Research, 2018). The government has enacted laws to ensure no misuse or discrimination of children with disabilities in this regard; disabled students have been granted particular attention for various social activities, such as

parking, access to public roads, lower requirements in education, and job employment opportunities (Ministry of Education of Saudi Arabia, 2008).

The numerous services available to disabled people—include children with multiple disabilities and their families—in Saudi Arabia are provided through several ministries and nonprofit organizations or associations. Three central government agencies are responsible for assisting individuals with disabilities: 1) the Ministry of Labor and Social Development (formerly known as the Ministry of Social Affairs) supervises activities related to vocational rehabilitation and social adaptation; 2) the Ministry of Health provides healthcare services; 3) the Ministry of Education is responsible for educational programs for people with disabilities (Japan International Cooperation Agency, 2002). In addition to these ministries, other groups work indirectly with the disabled population, as seen in Table 3.

Table 3

Sources of Service Providers to People with Disabilities in Saudi Arabia

Sources	Centers, Institutes, Programs, and Units
Ministry of Education	1. Al Amal Institutes 2. Al Noor Institutes 3. Educational Institutes for the Mentally Retarded
Ministry of Labor and Social Development	1. Social Rehabilitation Centers 2. Vocational Rehabilitation Centers 3. Comprehensive Rehabilitation Centers 4. Disabled Children Welfare Centers 5. Day Welfare Centers 6. Riyadh Centers
Ministry of Health	1. Medical Rehabilitation Centers 2. Prevention Role
Multi-welfare and Research	1. Joint Center for Research in Prosthetics, Orthotics, and Rehabilitation Program 2. The Saudi Benevolent Association for Children with Disabilities 3. Prince Salman Center for Disability Research

Administration Units in Saudi Universities	1. Abin Omm Mactom Center (King Saud University) 2. Blind Service Center (Proprietary College at King Saud University) 3. Al-Noor (i.e., light) Committee for Blind People (Omm Algora University) 4. Students with Disabilities Club (King Abdulaziz University)
National Disability System	1. Under the Supervision of Prince Salman Center for Disability Research

Source: Alhammadi, H. A. (2000). *Future challenges: A study of the needs of adults with disabilities and related policies in Saudi Arabia.* Dissertation from University of Denver.

Ministry of Labor and Social Development

The Ministry of Labor and Social Development in Saudi Arabia supervises the programs offered to disabled children with multiple disabilities (Alquraini, 2011; Hussain, 2009). It has developed a program for paralyzed children who live with their families, providing an allowance of 10,000 Saudi Riyals (SAR) equivalent to $2,666.00 annually for each paralyzed child, and ensuring that the students have access to good housing (Al rubiyea, 2010; Madi, 2014). There are also social rehabilitation centers in Saudi Arabia, which give attention to disabled children and encourage them to pursue greater opportunities, including access to education. Some of these social rehabilitation centers, which are in Al-Madinah, Al-Ahsa and Al-Riyadh, provide services to more than 255 male and 359 female elementary school students and 261 students in nursery schools (Alquraini, 2011). According to Aleisa, Al-Sobayel, Buragadda, and Rao, (2014), several day care centers provide rehabilitation services to children with disabilities, including polio care institutes that deliver education, health care, and social care to paralyzed children, which enhances their development.

Unlike rural areas, urban areas are equipped with institutions that assist people with multiple disabilities, even though they are not able to serve all those who have disabilities (Alquraini 2010). Even with services available, a large percentage of people fail to seek help due to fear, denial, or a lack of understanding about how to deal with the disability. Most people with special needs are also ignorant of the role of health facilities in aiding people in their situation (World Health Organization, 2006). Although services developed to assist disabled individuals are guaranteed by law it is an overwhelming challenge for providers to help all people, considering the geographical distribution of the rehabilitation centers. Included in the program are medical, psychological, and counseling services. The Ministry of Labor and Social Development oversees the instruction for mentally and physically disabled and the training of social, educational and vocational skills, with the goal that these individuals can enter society as autonomous, gainful people (Royal Embassy of Saudi Arabia in Washington, 2018; Al-Jadid, 2013).

Ministry of Health

The Saudi health care network provides free care to the general public, including disabled children. The Ministry of Health (MOH) is one of three ministries under the authority of the Kingdom that provides funding and services to individuals with disabilities. Services are offered through hospitals and medical rehabilitation centers. Two hundred fifty-one hospitals (Al-Jadid, 2013) and 2,037 primary health care centers administered by the Ministry of Health served Saudi Arabia (Almalki et al., 2011). These hospitals and centers assist people with injuries that lead to disabilities, such as trauma, stroke, and tumors. Unlike the elderly, younger people require intensive rehabilitation to live independently (Sanford et al., 2011).

During the last two decades, the government of Saudi Arabia has established numerous rehabilitative centers to aid individuals with disabilities (Al-Ahmadi, 2009). Once admitted in these facilities, patients gain access to occupational, physical, speech, and hearing therapies (Al-Qahtani & Wyne, 2004), as well as to prosthetic and orthotic services. In the government institutions, the rehabilitation services do not discriminate against people in need (Al-Dawood, 2002) and these centers serve both the citizens and the non-citizens in the country. There are presently 18 facilities (e.g., physical and mental treatment and rehabilitation of patients) staffed or administered by the Ministry of Health to help disabled people (Okasha, 2003; Yamani, 2000; Royal Embassy of Saudi Arabia in Washington, 2018). Families with disabled children have complained that they do not receive the best possible therapeutic services that the Saudi authority has promised (Rotatori et al., 2014; Al-Mousa, 2010). Families face numerous difficulties as they search for free philanthropic services or low-cost private services to treat the child. They endure considerable inconvenience transporting their child to physiotherapy. Furthermore, parents do not receive any financial help to defray the expenses of these services (Alquraini, 2010; Cook, 2001).

Ministry of Education

The overarching goal of the Saudi government, in terms of education, is to provide free and appropriate education to all Saudi citizens, including those with disabilities. Providing access to education that is "appropriate" requires understanding individual as well as family needs, and then designing educational support systems. Empowering children with disabilities by granting access to education (Al-Ahmadi, 2009) is a key factor in achieving the government's goal. There are numerous social services for children with disabilities in Saudi Arabian schools and parents receive discounts on airlines and transportation systems, so they can travel easily to the

education centers (Cross et al., 2004). Moreover, Saudi government identified polices and guidelines for the welfare of children with special needs. These include monthly benefits (375 SAR), annual financial support, discounts on public transport, and free access to parking spaces for special needs families in public areas (Al rubiyea, 2010).

As indicated by the Regulations of Special Education Programs and Institutes (RSEPI)**,** all students with disabilities, either in custom-curriculum organizations or in government-funded schools, should obtain more benefits from their individual education programs (Ministry of Education of Saudi Arabia, 2002 as cited in Battal, 2016); Alquraini, 2011; Alquraini, 2012). Numerous Saudi studies have assessed the possibility of related social services and their relevance for children with disabilities in specialized-curriculum schools or state-funded schools (Prince Salman Center for Disability Research, 2018; Al-Wabli, 1996; Alquraini, 2007). It is clear that apart from the specialized education system, children with disabilities require additional specialized services, such as language translation, sign language experts for the deaf, experts for the blind, psychiatrists, and mobility specialists to help children move comfortably. Possible reasons that these services are not available include a lack of experts who work in these fields, and the employment of these experts in health care facilities rather than in schools (Connor, Gabel, Gallagher, & Morton, 2008).

The Ministry of Education has designed a curriculum to provide special education for students with disabilities. Originally, the special education system was designed to provide special services to students who were considered to have low-incidence disabilities, and these low-incidence disabilities account for approximately 1% of the general population of students (Ministry of Education of Saudi Arabia, 2008). These included students with visual impairment, mental retardation and hearing impairment. However, the issue of multiple disabilities has been a challenge

for the Ministry of Education. For instance, some cases of multiple disabilities require highly specialized care, since the children are difficult to accommodate within regular special education classes or in mainstream classes (Alquraini, 2011).

Special education classrooms have not met the needs of students with multiple disabilities. Neither have the support services that the schools provide. It is evident from the studies that only a few schools provide related social services to learners with disabilities, such as transportation, psychological services, guidance, and counselling (Al Otaibi & Al Sartawi, 2012). In the interim, they need the related social services of physical therapy, speech pathology, language pathology, as well as occupational therapy (Kashrami, 2003; Alzahrani, 2005; Kotb, Hammouda, & Tabbara, 2006). One of the challenges to providing appropriate education resources is the absence of experts who provide these services, as well as the various challenges facing those already practicing social work within the educational setting. Social Workers face obstacles when working with students with disabilities. For example, it is evident that the lack of adequate facilities for providing preferential treatment is a major challenge (Alquraini, 2007). For example, preferential treatment would be demonstrated by transportation, communication, healthcare, social inclusion, and employment. According to Alquraini (2012):

> Special education institutes lack related services, such as occupational therapists, physical therapists, and speech and language pathologists who could provide support and services for students with disabilities, enabling them to acquire more benefit from their individual education programmes (programs) and develop their communication, physical and other life skills, similar to those provided in some public schools for students with mild disabilities. (p. 12)

According to Alzahrani (2005), the goal of the special education policy in Saudi Arabia is to provide a free and appropriate education to students with disabilities. These services focus on helping prepare students with disabilities to lead inclusive lives. Similarly, special education policies in Saudi Arabia aim to prepare students with disabilities for public life so that they may become productive members of society and are able to support themselves (Al-Mousa, 2008). There are also custom-curriculum foundations for the visually impaired and the hard of hearing throughout the country, as well as communities for disabled students (Connor et al., 2008). Saudi Arabia governments strive to provide appropriate educational services to individuals with disabilities. However, the lack of experience by social workers and disparity of needs among students in special needs classrooms make the achievement of education for disabled children a challenge.

Social Work and Children with Multiple Disabilities

People who care for children with several impairments are likely to face numerous difficulties and need support to function properly (Axelsson, 2015). Consequently, parents, siblings, and others often seek help from professionals. For example, meeting the needs of deaf children and their families is a multidisciplinary process (Dalzell, Nelson, Haigh, Williams, & Monti, 2007). Finding a standard approach for the needs of families is not easy because much depends on the professional's expertise or experience, since it is likely that families will have different needs at diverse times because of the changeability of inside and outside factors that influence them (Dalzell et al., 2007).

It is imperative for educational specialists, the child's parents, medical specialists, social workers, and others to work as a team to handle the issues of a

child's care. Therefore, every member of the team must play his or her part because involving professionals increases the chances of handling any problem effectively.

Perhaps one of the most important professions used to assist this group of children is the profession of social work. In recent years, social work has become a vital component in caring for these children because of increasing problems that have interfered with the children's normal social or academic progress. Social workers are among the most appropriate professionals for parents to contact when it becomes too difficult to meet the needs of these children. They help in different areas, including providing information about diagnosis, medical insurance, treatment cost, medical appointments, and the children's needs at a health facility or school. Social workers offer guidance and counseling to children who live with disabilities (Giangreco, Edelman, Broer, & Doyle, 2001; Laws, Parish, Scheyett, & Egan, 2010). Social workers offer support to families when they are unable to cope with their children's disabilities or when the children have problems with academic performance. They assist children who refuse to take medication, and offer counseling to those who suffer from other health, social, or financial conditions caused by their disabilities.

Social workers provide valuable guidance and support when invited to participate. However, parents caring for children with multiple disabilities may not access care because their needs are so unique and overwhelming. Further, social workers may be experts with a particular disability, but unfamiliar with some type of disabilities especially for those who do not have social work degree.

Social Work Studies of Children with Multiple Disabilities and their Families

After a thorough search of most available databases and other sources, it is evident that most social work studies involving children with disabilities focus either on children with only one disability (e.g., Matz, 2013; Curran, 2010) or on disabled

children in general (e.g., Wong, 2013; Diehl, 2003; Middleton, 1998). One such study conducted by Hefny (2001), focused on the psychological problems of children with multiple disabilities and the role of the social worker. This quantitative study, conducted in four Egyptian institutes, was applied to 12 deaf-mute and mild-mentally disabled children, 12 blind and mild-mentally disabled children, 12 motor and mild-mentally disabled children, and 60 social workers who provide basic care for children with multiple disabilities. While the study focused directly on multiple disabilities, it contained several strengths and weaknesses. Although it collected information from a relatively small sample for this quantitative study, it used several questionnaires to gather and analyze data from different perspectives. The findings warrant the practice of social work and those who work with children with multiple disabilities. The study found that: 1) children with multiple disabilities face several psychological problems; 2) the social worker has specified roles in which to deal with the psychological problems of children with multiple disabilities; and 3) there are differences among children with multiple disabilities in their psychological problems and emotional and behavioral disorders, according to the type of disability.

The study encourages social workers to be sensitive and curious about the many ways in which relationships with other people and the social world shape the children's identities. For the purpose of current discussion, the study demonstrates at least two significant weaknesses. First, it received no direct input from either the children or their families. Second, the sample was small for a quantitative study, with only 60 social workers and 36 children with multiple disabilities included. Even so, it has an important strength, as it is one of the few social work studies specifically focused on the needs of children with multiple disabilities.

McConkey, Nixon, Donaghy, and Mulhern (2004) also conducted a study that considered social workers, disabled children, and families with disabled children. The analysis is credible because it followed the research structure and included children with multiple disabilities. Furthermore, the study used a large number of participants—596 disabled and non-disabled foster children. The study showed that disabled children have a variety of needs, including the need for respite services. Families need relief from the extra demands of caring for disabled children, which included managing challenging behaviors, communication problems, and dependence on technology. Families with disabled children experienced health and social problems that made it difficult to meet their children's needs. This knowledge is crucial for social workers in order to address the unmet needs of disabled children and their families.

Lindsay, King, Klassen, Esses, and Stachel (2012) conducted an equally important study with significant implications for social workers and children with multiple disabilities. This study focused on immigrant families with disabled children to determine the challenges experienced by these families and offered recommendations for health care providers and community service providers. An important feature of this analysis was its clear structure that contained all sections of a formal research paper. The study used a qualitative approach that combined focus groups, interviews, and purposive sampling techniques to collect information from a wide range of participants, including social workers. While the study focused on disability in general, without any significant emphasis on multiple disabilities, it provided crucial information for social workers since it containd information about the challenges experienced by immigrant parents with children with disabilities. Some of these challenges, such as the absence of culturally sensitive training, differences in

the perception of disability, communication problems, and lack of rapport were also likely to occur among the immigrant parents. When social workers work with such children, it is important to allocate more time and exhibit patience in order to build rapport and increase trust. The findings also demonstrated the importance of cultural sensitivity when working with children and parents from immigrant families in order to meet their needs in an effective manner. The study contained several weaknesses, particularly when discussing the needs of children with multiple disabilities, because it focused on children with a single physical disability. Additionally, the study used a small sample of 13 individuals and failed to describe the method for selecting the sample. However, it does have one important strength—its recommendations recognized the important role of the family in coping effectively with disabled children.

Lindsay et al., (2014) conducted a qualitative study that looked at social workers who cared for disabled children of immigrant families and evaluated their role as cultural brokers. There was only a small number of participants (45 clinicians) and the interviews were used to collect information. Although there was no direct emphasis on children with multiple disabilities, the results had significant implications for social workers, disabled children with any form of disability, and the families of the children. In addition to their health requirements, these children demonstrated needs related to their culture and it is important for social workers to be culturally sensitive and unbiased. The same applies to immigrant families because their culture differs from that of the social workers. For social workers to be culturally sensitive, they must overcome the challenges of being cultural brokers.

An exploratory and descriptive study by Fuchs, Burnside, Marchenski, and Mudry, (2005) explored the nature of disabilities among children and their care needs

in Manitoba, Canada. This study was conducted by the Faculty of Social Work, University of Manitoba, and the Child Protection Branch of the Manitoba Department of Family Services and Housing. According to the study, 58.1% of the disabled children had multiple disabilities and the most common combination of disabilities among these children was intellectual and mental health issues. The majority of disabilities in this study resulted from an unknown cause. The findings revealed that disabled children, including those with multiple disabilities, had numerous problems that caused extra demands on caregivers. Moreover, researchers discovered that the child welfare system was not currently structured in a manner to serve the families of children with disabilities. Data in this study indicated that many families were not receiving the services necessary to meet their needs from either the child welfare system, or from other service sectors; "how families receive the services they require, awareness of their needs and knowledge of how to address those needs must be the foundation of policy, program planning, staff training and service provision." (p. xiii)

The study asserted that social workers must be aware of the existence of different disabilities and available services. The authors pointed out that disabled individuals have additional stressors that require assistance. Furthermore, families need culturally sensitive support and training to meet the needs of their children with multiple disabilities. Training supports could include information on adaptations for children with multiple disabilities and strategies to help children who are coping with the behavioral aspects of disabilities, such as delayed functioning in one or more areas, lack of skill in foreseeing consequences and learning from previous experiences.

Saudi Studies of Children with Multiple Disabilities and their Families

The growth of the field of social work in Saudi Arabia has occurred at a time when social solidarity in families and communities has declined (Albrithen & Briskman, 2014). Moreover, the commitment of Saudi family members has changed due to changes in the socio-economy of Saudi Arabia; these changes include work commitments and the need for women to work in order to keep up with the new style of living (Al rubiyea, 2010), a result of "rapid urbanization, industrialization, higher employment, improved levels of education, exposure to the developed world and the emergence of the middle class." (Hamadeh, Al-Roomi, & Masuadi, 2008, p. 227)

Since working families often find it difficult to provide appropriate care for their special needs children, social workers in Saudi Arabia have greater opportunities to serve people. From a broad perspective, social workers may act as therapists, service coordinators, trainers, and consultants when dealing with disabled children (Malone, McKinsey, Thyer, & Straka, 2000). They may have the relevant training to work with individuals, families, and groups at different levels and help these stakeholders in an effective manner (Stanley, 2012).

Disability is one of the imperative health and social issues in Saudi Arabia (Al-Jadid, 2013). The major care gaps that prevent people with disabilities from receiving the appropriate services include limited access by poor families, a lack of adequate service coverage, and the poor quality of services offered by public agencies (Al-Jadid, 2013). These are critical areas for social workers to consider when attempting to meet the needs of individuals with multiple disabilities and their families.

Despite the magnitude of the disability issue, there is no adequate scientific information about children with multiple disabilities and their families in Saudi

Arabia because most of these studies have looked at only a single type of disability (e.g., Kotb et al., 2006; Alzahrani, 2005; Alquraini, 2011; Alquraini, 2012; Zamzami, 2005; Alotaibi, 2006; and Kashrami, 2003). There are a few studies, most of which are deficient, and several difficulties experienced in the studies are worth noting.

First, almost all Saudi children with multiple disabilities receive their education in separate institutes designed for children with a single impairment (Alqahtani, 2016). According to the Ministry of Education of Saudi Arabia (2008), 96% of students with multiple disabilities are served in specialized curriculum schools, separate from the other students. These students are frequently taught in isolated settings that do not permit them to connect with their peers in inclusive settings that could enhance social interaction (Cross et al., 2004; Nour, 2005; Al-Jadid, 2013). There are contradictory views about including disabled students within the current education system (Alghazo & Naggar, 2004; Al-Mousa, Al-Sartawi, Al-Adbuljbbar, Al-Btal, & Al-Husain, 2006). Alquraini (2012) asserted:

> Special education institutes lack related services, such as occupational therapists, physical therapists, and speech and language pathologists who could provide support and services for students with disabilities, enabling them to acquire more benefit from their individual education programmes (programs) and develop their communication, physical, and other life skills, similar to those provided in some public schools for students with mild disabilities. (p. 12)

According to Al-Herz (2008), this segregation limits improvement for the students whereas inclusion could improve their academic and communication skills. Nour (2005) stated that multiple disabilities among children lead to severe educational needs and these needs cannot be accommodated in special education programs

designed for children with a single impairment. Even though the Ministry of Labor and Social Development and Ministry of Education are responsible for offering programs to disabled children—including the multiply disabled—throughout Saudi Arabia (Alquraini, 2010; Hussain, 2009), only the urban areas are properly equipped with institutions for these services (Al rubiyea, 2010). Consequently, this allocation does not serve all children with disabilities (Alquraini, 2010).

Second, it is troubling that there is no adequate data and information about the incidence and frequency of disability because of the lack of relevant studies focusing on disability (Kisioglu et al., 2003). Evidently, researchers have not ventured into social work studies involving children who suffer from multiple disabilities and there is inadequate research on the patterns of disability in Saudi Arabia despite increasing awareness (El-Hazmi, Al-Swailem, Al-Mosa, & Al-Jarallah, 2003).

Caring for children with multiple disabilities produces pressure that affects the physical, cognitive, and emotional wellbeing of all relatives (Pelchat & Lefebvre, 2004; Floyd & Gallagher, 1997; Nijs, Vlaskamp, & Maes, 2016). A number of studies have demonstrated that parents of children with numerous inabilities, particularly mothers, experience lower levels of anxiety when they have casual social help, stress reduction abilities, and a connection with all relatives (e.g., Kermanshahi et al., 2008; Dyson, 1997; Dunst, Trivette, & Cross, 1986). Many studies show that families of children with disabilities experience higher levels of stress than families without a disabled child (e.g., Upadhyay & Havalappannavar, 2007; Aldosari & Pufpaff, 2014), and these higher levels of stress are most common for the disabled child's mother rather than other members of the family (Al rubiyea, 2010). This pressure is usually due to the social orientation of a society that has not fully accepted that people with disabilities can fit in societal systems if primary care is provided. In a study conducted

by Aldosari and Pufpaff (2014), it was found that raising a child with intellectual disabilities is stressful and frustrating and can lead to the parents feeling alienated from the society, affecting the emotional and cognitive development of the family, which reinforces moral shame.

Taking care of people with disabilities requires a great deal of time and understanding and may affect the family's economic wellbeing. A study conducted by Crowe, VanLet, and Berghmans (2000) found that parents with a disabled child experienced more anxiety than parents without such a child. These families need to know the best way to care for children with disabilities and to understand the legal provisions that will protect them; they need to be trained to know their rights, such as access to free medical and education services for children with disabilities, and to learn ways to improve the lives of their children. The first reaction of a parent to the birth of a child with numerous disabilities is often a mix of sadness, misfortune, and disdain that hinders the parents' ability to acknowledge the child (Van Riper, Ryff, & Pridham, 1992). According to Farzanekia (1985), raising a child with various disabilities can be oppressive, unpleasant, disappointing, and can likewise cause the parents' estrangement. Family needs change as the child grows, and systems that provide cutting-edge data are required throughout the life cycle of the family. Disabled children need information about their condition and treatment, about how to live with the condition, and how to handle the hindrances of their handicap. They need experts who will talk to them directly and not communicate with them through their guardians (Al-Jadid, 2014). Because of the lack of relevant demographic research on disability, additional studies can help to determine the types, etiologies, and rates of disability, as well as their socioeconomic effect on the society (Elsheikh & Alqurashi, 2013).

Another significant research problem is that most of the studies are merely surveys (Al-Gain & Al-Abdulwahab, 2002; Al-Hazmy, Al Sweilan, & Al-Moussa, 2004; Lang, 2000; El-Hazmi et al., 2003). Consequently, there is a great deficiency due to the limited nature of research and the extent of information. There is also inadequate research on the early identification of disabilities and intervention management. When considering the study conducted by Al-Hazmy, Al Sweilan, and Al-Moussa (2004) to determine the incidence and causes of disability among Saudi Arabian children, it is important to note that there was no direct focus on social work or on children with multiple disabilities and their families. The researchers merely conducted a field survey, which provided little information about social work. There was no call to action for social workers to assist the children with multiple disabilities or to assist the families of such children. The same problem applies to the study performed by El-Hazmi et al. (2003), in which the researchers sought to determine the prevalence and distribution of most common types of disability among Saudi Arabian children. This study offered little help to social workers and fails to address children with multiple disabilities or their families. These research studies are evidence that researchers have yet to conduct social work studies regarding the needs of children with multiple disabilities and their families.

Additional available studies on disability display significant weaknesses in terms of how researchers managed their data and used inferior data-gathering techniques, such as data linkage, matching, analysis, international comparability, and sampling (Al-Gain & Al-Abdulwahab, 2002). Therefore, there is a need for sound research to provide reliable statistical information. Some studies, such as the one conducted by Al-Asmari, Al Moutaery, Akhdar, and Al Jadid (2006) focused on specific disabilities and left the aspects of social work and multiple disabilities

unstudied. A final significant barrier to disability research in Saudi Arabia is the lack of a standard outcome measure to assess the degree of disability. This deficiency means that the country has a problem in determining types of disabilities, including multiple disabilities, among children (see Tables 4, 5, 6, and 7).

Table 4

Disability by Gender and Type of Disability in Saudi Arabia in 2004

Type of Disability	Females	Males	Total
Blind	5,337	11,670	17,007
Deaf	1,082	1,622	2,704
Deaf and Mute	6,024	11,558	17,582
Lost an Organ	814	2,085	2,899
Mentally Retarded	9,720	14,892	24,612
Paralysis	10,542	19,157	29,699
Other	10,510	19,583	30,093
Total	44,029	80,567	124,596

Source: Central Department of Statistics and Information (2004). *Highlights on Population & Housing Census in Kingdom of Saudi Arabia 1425H, 2004.* Available from https://stats.gov.sa/sites/default/files/Census-All-1425.pdf , (Accessed 17 December 2017).

Table 5

Disability by Gender and Type of Disability in Saudi Arabia in 2007

Type of Disability	Females	Males	Total
Moving	15,048	29,408	44,456
Visual	3,450	6,072	9,522
Speech	2,627	4,440	7,067
Hearing	1,709	4,064	5,773
Mental	10,978	18,529	29,507
Psycho	1,437	3,869	5,306
Epilepsy	1,446	2,153	3,599
Multiple	7,520	13,942	21,462
Other	3,050	5,214	8,264

Total	47,265	87,691	134,956

Source: Central Department of Statistics and Information (2007). *Highlights Demographic Survey 1428H, 2007,* (Accessed 17 December 2017).

Table 6

Disability by Gender and Type of Disability in Saudi Arabia in 2010

Type of Disability	Females	Males	Total
Blind	13,921	17,203	31,124
Deaf	3,781	5,168	8,949
Deaf and Mute	11,275	15,900	27,175
Lost an Organ	1,991	7,160	9,151
Mentally Retarded	15,957	26,984	42,941
Paralysis	17,186	27,471	44,657
Other	16,215	26672	42,887
Total	80,326	126,558	206,884

Source: Central Department of Statistics and Information (2010). *Population and Housing, Detailed results of Census 2010.* Available from https://www.stats.gov.sa/en/13 (Accessed 17 December 2017).

Table 7

Disability by Gender and Type of Disability in Saudi Arabia in 2016

Type of Disability	Females	Males	Total
Seeing	95,519	140,344	235,863
Self-care	4,635	5,647	10,282
Hearing	33,206	43,696	76,902
Mobility	108,588	146,091	254,679
Memory and concentration(cognition)	9,076	15,128	24,204
Communication	25,802	39,548	65,350
Total	276,826	390,454	667,280

Source: General Authority for Statistics in Saudi Arabia, (2016a) *Demography Survey*, Available from https://www.stats.gov.sa/ar/4522 , (Accessed 17 December 2017).

Since there is no adequate research that discusses the needs of children with multiple disabilities or their families in Saudi Arabia, it is necessary to change the

types of studies on cutting-edge social needs to consider all aspects of disability in order to gather adequate information (Elsheikh & Alqurashi, 2013). Studies involving disabled persons in Saudi Arabia should take a multidisciplinary approach in which different specialists from related areas become part of the research process. These studies should also focus on strategies for elucidating, treating, and preventing disabilities (Elsheikh & Alqurashi, 2013).

Al rubiyea (2010) conducted a study on the rights and the needs of children with special needs in Saudi Arabia, the only one related to the topic of social work with disabled children and their needs. Table 8 summarizes the three studies in Saudi Arabia related to needs of the families of children but not with multiple disabilities. These three studies focused on families of children with a single disability.

Table 8

Saudi Studies on Needs of Families with Children with Disability

Author (s)	**Omar Fawaz Abdul Aziz**	**Adnan Alhazmi**	**Najati Yunis**
Title	The Needs of Families of Mentally Retarded Children and Its Relationship with Sex, Age, and Degree of Disability	The needs of parents of intellectually disabled students and its relationship with some variables.	Needs of Parents of Children with Autism in Saudi Arabia and it's Relation with Some Variables
Year of analysis	2012	2009	2015
Study location	Jeddah, Saudi Arabia	Madinah, Saudi Arabia	Jeddah
Reference	Abdulaziz, A. F. (2012). [The needs of families of mentally retarded children and its relationship with sex, age, and degree of disability]. The International Interdisciplinary Journal of Education, 1(11), 801-819.	Alhazmi, A. N. (2009). [The needs of parents of intellectually disabled students and its relationship with some variables.] Unpublished dissertation, King Saud University, Saudi Arabia.	Yunis, A. N. (2015) Needs of Parents of Children with Autism in Saudi Arabia and it's Relation With Some Variables. Dirasat: Educational Sciences, 42(2) 481-498
Study population (n)	NA	559 fathers	NA
Type of disability	Mentally Retarded Children	Intellectually Disabled Students	Autism Children
Sample size	164 families	383 fathers	87 parents
Study language	Arabic	Arabic	Arabic

Settings	Intellectual Education Institutes in Jeddah	Intellectual Education Institute and programs in Al-Madinah- for males	Institutes and programs affiliated to Ministry of Education and Ministry of Labor and Social Development in Jeddah
Sample gender	male and female	males	male and female
Discipline	Special Education Dept. King Abdul Aziz University	Special Education Dept. King Saud University.	Special Education Dept. King Abdul Aziz University

NA = information not available

Al rubiyea notes that his study "represents the first research in this area." (p. II) This statement underscores one of the main arguments in this dissertation—the necessity for social work research that explores the needs of families of children with multiple disabilities in Saudi Arabia.

Al rubiyea's work used extensive quantitative and qualitative (mixed method) data collected on special needs children from five different regions, using semi-structured questionnaires, focus groups, and in-depth interviews, as well as a document analysis of a wide range of official and personal documents. The study identified social barriers as one of the main obstacles for rights and needs of children with special needs. It also utilized a comprehensive set of research questions, including:

> What is the current situation regarding the rights of children with special needs in Saudi Arabia?; What are the main roles and duties of the State, parents, child welfare and care agencies in meeting the care needs of children with special needs?; What are the roles of the Kingdom of Saudi Arabia in protecting the rights of children with special needs?; What are the main barriers facing children with special needs regarding their needs and rights?; and What are the main stress[es] facing parents with children with special needs? (p. 5)

The researcher used three semi-structured questionnaires, one for 350 parents of children with a mental disability and the second for 350 parents of children with a physical disability. The third was used for 240 care professionals from different care agencies for the mentally and physically disabled. Also used were in-depth, semi-structured interviews with 14 child-care authorities to obtain their opinions and attitudes toward children with special needs. He also conducted focus groups with 97 parents of children with special needs from the five regions. It is not clear how many, if any, of these parents took part in his earlier surveys.

The main strength of this study was the use of multiple methods to collect the data and information, which offered a breadth of material on topics related to physically and mentally disabled children. In addition to a wealth of demographic information, the study arrived at several significant conclusions. It noted the pressures that parents of disabled children face, including a lack of support (financial, emotional, etc.) from both the state and social support agencies. Regarding meeting the needs of families of children with special needs, Al rubiyea stated, "The key outcome concerning this issue is that the authorities (in Saudi Arabia) are moving in the right direction but there is a gap that needs to be fulfilled." (p. 176), such as, improving financial support is one of the main ways of meeting the need of such families, for example, "the majority of the parents have low incomes and cannot cope with the financial investment needed for the alteration of their houses." (p. 192-193)

Moreover, participants in Al rubiyea's study indicated that the mother is the most stressed member of the family for many reasons. Because the society in Saudi Arabia is strongly male-dominated, social factor is the first reason. Second, the mother of is the one who takes on all the responsibilities with little or no help from the males of the family. Third, the workload of the daily care of her disabled child left

very little time and space for her to look after herself, her husband, her other children, and her other social responsibilities. Finally, the lack of home care offered by society limited her options.

The study highlighted the disparity between the services offered in the Kingdom's large cities and those available elsewhere. The study argued that the current situation gave greater access opportunities for children with special needs at the center of the cities than to those who lived outside the cities.

> Children who live far from the cities are denied appropriate rights in education and care…children with special needs in rural areas suffer more due to lack of the health services in general and, more particularly, health services for children with special needs. (p. 146 and 221)

Special equipment is an important facility to support the needs of families of children with special needs, such as the equipment that the child need outside school or to join in with the organization's activities. Moreover, Al rubiyea stated that falling short financially is the main source of the parents' stress, while the lack of care agency support as the least important factor in terms of the parents' stress. Parents in Al rubiyea's study indicated that the main problems that prevented them from taking their children to the care agency were access to transportation, finance, and unclear policy. The health-related issues of their children were one of the major needs of the disabled children' families in Saudi Arabia (e.g., "the majority of care agencies lack a systematic health system to check and monitor health. In fact, participants claim that some care agencies lack awareness of child health issues." P. 157) Moreover, social interaction between the disabled child and society is one of the family needs. Al rubiyea stated "children have little social interaction and that the main reason for this is their mobility since they spend most of their time at home." (p. 158), and most of

their social interaction is with their sisters, brothers, and immediate family. For example, the parents discussed the lack accessibility and facilities in shopping centers, public areas, and government institutions for their disabled children. Finding accessible parking spaces in public places created a social barrier for the parents of children with special needs.

Finally, researchers observed that the major problems and barriers facing children with special needs in obtaining their rights and receiving appropriate care included a lack of financial support, poor transportation options, social barriers, and non-existent or unclear policies. These findings offered a useful baseline of data concerning these populations, which was a helpful starting point for future research in the area. However, what Al rubiyea's study offered in breadth it lacked in depth. For example, while the researcher discussed the different dimensions of needs, he made no attempt to prioritize them and did not provide a detailed analysis of any of these needs. For current research, the lack of a specific focus on families of children with multiple disabilities is a significant omission. To be fair, it would be impossible to explore the many issues that the researcher covered in any depth. Therefore, the approach is appropriate for an initial foray into this field that will no doubt provide numerous questions for further exploration.

Discussion

Based on an analysis of the literature, most of the social work studies conducted throughout the world focused on disability in general or single disability, but did not focus on multiple disabilities. In the current study, it is assumed that the findings will have important implications for social workers, children with more than one disability, and the families of these children. It is evident that some of the studies that pay major attention to social workers and disabilities contain deficiencies in terms

of the types of research conducted and the methodologies used to gather and analyze data. Most studies are qualitative and leave a statistical gap. Furthermore, most of these studies are also methodologically weak (Simkiss, Blackburn, Mukoro, Read, & Spencer, 2011). According to Bailey and Simeonsson (1988), "The assessment of family needs traditionally has been the responsibility of psychologists, family therapists, and social workers." (p. 117) Nevertheless, most of the available studies that focus on disabled children have identified the majority of the challenges and needs of these children and their families. Existing studies provide crucial information for social workers to understand the needs of their clients and to decide how to meet these needs in a professional and effective manner.

Social work studies that focused on the needs of disabled children, including those with multiple disabilities and their families, are very rare in the context of Saudi Arabian research (Al rubiyea, 2010). Most of the disability-related studies in the country do not provide adequate information because they use ineffective data collection methods, such as surveys. Researchers have largely ignored social work studies that target individuals with multiple disabilities and seem to disregard studies that can provide adequate information about the needs of families and persons with multiple disabilities. A number of studies demonstrated that parents of children with numerous inabilities (multiple disabilities), particularly mothers, experienced lower levels of anxiety when they had casual social help, stress administration abilities, and a connection with all relatives (e. g., Kermanshahi et al., 2008; Dyson, 1997; Upadhyay & Havalappanavar, 2007; Crowe et al., 2000). There is also a significant shortage in the number of studies that examine social work and social services in Saudi Arabia.

While several studies identified the importance of the family in addressing the needs of children with multiple disabilities (e. g., Lindsay et al., 2012; Lindsay Tétrault, Desmaris, King, and Piérart, 2014; Fuchs, Burnside, Marchenski, & Mudry, 2005; McConkey et al., 2004), few studies exist that explore the families' crucial role. The family role stems from the nature of children with multiple disabilities as most are unable to advocate for their needs and many may be unable to articulate them, leaving the family members to serve as the primary advocates. The situation is particularly ambiguous in Saudi Arabia because of factors that place the family on center stage where the dramas of faith, shame, and competing needs of other siblings play out. Any study of how best to address the needs of children with multiple disabilities without focusing on the central role of family seems doomed to failure (Lindsay et al., 2012). Therefore, in the global context, there is a need to conduct quality social work studies with a direct focus on families who work with individuals with multiple impairments to establish the needs of such people. Because the available research mainly focuses on children with a single disability, the gap in research requires immediate action.

CHAPTER III

METHODOLOGY

This chapter discusses the methodology for this study: research design, data collection procedures, sampling techniques, definitions of measures and variables, issues of validity and reliability, and the data analysis plan. Also discussed are consent procedures and Institutional Review Board (IRB) requirements.

Research Design

The current study will use the descriptive survey method based on the current and actual occurrences within the families of children with multiple disabilities in Saudi Arabia. This method is appropriate and the ideal for this type of study because no methodologically sound study has examined the perspective of parents raising children with multiple disabilities in Saudi Arabia. A quantitative research method will be used to address the research questions and objectives: 1) What are the perceived *educational* needs of the families (fathers and mothers) of children with multiple disabilities?; 2) What are the perceived *financial* needs of the families (fathers and mothers) of children with multiple disabilities?; 3) What are the perceived *social* needs of the families (fathers and mothers) of children with multiple disabilities?; 4) Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary, based on the parents' gender, education level, and monthly income?; and 5) Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary, based on the child's gender and the child's type of disability?

Data Collection Procedures

The data for this study were collected between May 2016 to September 2016 in Riyadh, Saudi Arabia. The process was as follows: six graduate students, working with families from King Saud University's Master of Social Work program, and three school social workers from intellectual education institutes, Al Noor institutes and Al Amal institutes, assisted the researcher. Next, the researcher sent an email that included an informed consent document and a copy of the questionnaire to all school social workers at the intellectual education institutes, Al Noor institutes, and Al Amal institutes in Riyadh. The researcher asked social workers to help recruit families of children with multiple disabilities within one of these identified schools who might be willing to participate in the study. The informed consent document (Appendices C and D) explained the nature of the study, stated that participation was voluntary, and assured confidentiality. Along with the informed consent document and the questionnaire, a copy of the approval from the Branches of the Ministry of Education for Boys in Saudi Arabia and Girls in Saudi Arabia was included granting permission to conduct the study. Families volunteering to participate in the study received a consent pre-letter and the survey questionnaire. Participants returned the questionnaire in a sealed envelope that would be collected by the researcher. Over a three-week period, the research team visited the individual families once during the school day (7:00 AM to 1:00 PM) to gather data.

Sampling Techniques

The study was implemented in the General Administration of Education of Riyadh under the Ministry of Education in Saudi Arabia, a public-school district located in the capital of Saudi Arabia. The sample consisted of families of children with multiple disabilities (male and female, between 5 and 18 years of age) enrolled

in multiple-disability programs at intellectual education institutes, Al Noor institutes, and Al Amal institutes in Riyadh, Saudi Arabia, during the 2016 academic year. Families who did not have a child enrolled in one of the 10 selected institutes were not included in this study; they may be subjects of a future study. Participants were recruited from 10 institutes in Riyadh, Saudi Arabia (see Table 9). The reason for using all the families is that some institutes educated a small number of children with multiple disabilities. The final study sample included 196 individuals (98 couples) whose names were obtained from the General Administration of Education in Riyadh.

Table 9

The Population of the Families with Children with Multiple Disabilities (CMD)

#	Name of institute	Total of children at the institute	Total number of CMD at the institute	Total sample
1	Intellectual Education Institute in western Riyadh - male	310 (2014)	53	187
2	Intellectual Education Institute in eastern Riyadh - male		134	
3	Intellectual Education Institute in western Riyadh - female	N/P*	N/P	N/P
4	Intellectual Education Institute in eastern Riyadh - female	N/P	N/P	N/P
5	Al-Noor Institutes for the Blind in Riyadh - male	170 (2014)	10	10
6	Al-Noor Institutes for the Blind in Riyadh - female	N/P	N/P	N/P
7	Al-Amal Institutes for the Deaf in western Riyadh - male	135 (2014)	5	5
8	Al-Amal Institutes for the Deaf in eastern Riyadh - male			

9	Al-Amal Institutes for the Deaf in western Riyadh - female	N/P	N/P	N/P
10	Al-Amal Institutes for the Deaf in eastern Riyadh - female	N/P	N/P	N/P
	Total	1,019	202	N = 202

* Not Published
Source: Statistics of Special Education (boys) for the 2014 academic year, General Administration of Special Education, Ministry of Education in Saudi Arabia.

Measures

The selection of measurements was based on a comprehensive review of the literature, the researcher's experiences in working with families, and extensive discussions with social workers who work with these families. Each family participated in an extensive questionnaire designed for this study, which consisted of two sections: Family's Demographic Information Section and Family's Needs Section (Appendix A is the English version and Appendix B is the Arabic version).

First Section: Demographic Information. The demographic information related to the family's and the children's demographic background. The rationale for the choice of the demographic variables was to provide as broad a demographic view as possible. Given the lack of research about this population, it is important to provide baseline demographic information that could be referenced in future research. Due to the lack of baseline demographic information, a broad variety of variables was selected, including gender of the parent, gender of the child, age of the parent, age of the child, marital status of the parent, and education level of the parent. Researchers also collected demographic data on the type of disability of the child, income level of the family, nationality of the parents, the charity and government support systems providing assistance to the family, and the parents' employment status. Family demographic factors correlated with the families' needs, which included educational

needs, financial needs, and social needs. For the purpose of this study, the families were defined as social units comprised of parents and children (Nour, 2005). The term *family*, as used in this study, includes parents and the immediate members of the extended or biological family who were involved in caring for children with multiple disabilities. The selection criteria for families was based on the following: 1) the family should have at least one child with multiple disabilities; 2) the child's age should range between 5 to 18 years, and 3) at least one family member should be able to read accurately and complete the questionnaire. The research targeted children with more than one disability attending Intellectual Education Institutes, Al Noor Institutes for the Blind and Al Amal Institutes for the Deaf. The study investigated the families of children with at least two of the following disabilities: profound, moderate, or severe intellectual disabilities, blindness, deafness, physical disabilities, autism, cerebral palsy, speech impairment, and problems with mobility. The study focused on all Saudi and non-Saudi families—because non-Saudi families are eligible to educate their children at these ten institutes—with one or more children with multiple disabilities at the male and female Intellectual Education Institutes, Al Noor Institutes for the Blind, and Al Amal Institutes for the Deaf. Each of these institutes had one or more classes for children with multiple disabilities. If a child's multiple disabilities included blindness, he or she was served by one of the Al Noor Institutes for Blind; if the disability included deafness, the child attended one of the Al Amal Institutes for the Deaf. If neither was the case, the child attended one of the Intellectual Education Institutes.

Second Section: Family's Needs. Items in this section were grouped by: 1) educational needs; 2) financial needs; and 3) social needs. Families were asked about their perceptions of these categories. An example was provided to assist participants

in evaluating the importance of the objectives of the desire to have needs met. Participants were informed to leave questions blank if they did not understand any of the concepts described in the questions. The three dimensions of the variables—educational, financial, and social needs—have been identified in Al rubiyea's 2010 study, Bailey's and Simeonsson's 1988 study, Alhazmi's 2009 study, and Abdulaziz's 2012 study. The last two studies focused on the needs of children with a single disability. This section contained 44 items to measure the families' educational (15 items), financial (10 items), and social needs (19 items), which were based on research, indicating the most important needs for families in Saudi Arabia with disabled children (Al rubiyea, 2010; Alhazmi, 2009; Abdulaziz, 2012). The questionnaire used a five-point Likert Scale to evaluate each participant's perspectives, which consisted of: 1) strongly disagree, 2) disagree, 3) no opinion or uncertain, 4) agree, and 5) strongly agree.

First Dimension: Families' Educational Needs

Fifteen items assessed the families' educational needs. Participants were asked to rate their educational needs, such as: I need information and guidance about any program(s) designed to help my child; I need training in methods of emergency medical intervention for my child, and; I need training in understanding and dealing with the impact of my child's multiple disabilities on his/her siblings.

Second Dimension: Families' Financial Needs

Ten items addressed the families' financial needs, ranging from the basic needs for food, clothing, housing, and transportation, to special financial needs related to their child's condition. Parents answered questions using a five-point Likert Scale. The items in this section targeted the parent's beliefs about financial support (e.g., I need financial support to pay for the services of a domestic worker to help take care of

my child; I need financial support to secure comfortable, safe, and appropriate transportation for my child; and government financial support is not enough for my child).

Third Dimension: Families' Social Needs

In the final section of this questionnaire, 19 items assessed the families' social needs. The same five-point Likert Scale was used as in the previous two sections. Parents were asked to share and rate their perspectives on social needs. For example: I need society's perceptions about children's disabilities to change via specialized programs on radio and television; I need time and the opportunity for my own social interactions; and I need to involve my child in the charity activities supplied by the government agencies (e.g., hospital visits and assistance to the sick people).

Issues of Validity and Reliability

Six professors in the fields of social work, special education, research, and measurement at the University of Louisville and King Saud University were asked to review the questionnaire's validity. A cover letter was attached to the questionnaire to explain the purpose of the research, to list the items on the questionnaire (including a reference list of reviewed literature), and to provide a summary of the methodological procedures. The items on the questionnaire were reviewed to ensure that the evaluation of needs was comprehensive. Further, to confirm the validity of the study, a pilot test of the survey was conducted with ten families who were not involved in the sample, to reveal whether the questionnaire measured participants' perspectives appropriately. The pilot group was asked about the clarity of the questions and structure of the items on the questionnaire. Finally, participants were asked to suggest items to include in the survey, based on their own educational, financial, and social

needs. The pre-testing revealed that the pilot group family members' feedback was positive and indicated that the questionnaires were clear and easy to understand.

The questionnaire was submitted to a group of experts for feedback (faculty members from King Saud University and School Social Workers in Saudi Arabia) to ensure the variables were appropriate. To obtain reliability indicators, Cronbach's alpha was computed for each of the three dimensions/items that targeted needs types. For the rating scale: 1 = poor and 5 = excellent. Higher scores corresponded with more reliable scales. Rubin and Babbie (2011) said that 0.80 to 0.89 are considered good reliability coefficient, and lower thresholds are sometimes used in the literature and acceptable.

The internal consistency of the questionnaire was evaluated by using Cronbach's alpha coefficient. The total alpha coefficient of the questionnaire was 0·88 for the overall scale, which mean a good reliability and from 0·50 to 0·94 for the six subscales (Table 10).

Table 10

The Cronbach's Alpha Values for the Questionnaire

Sample	Dimension	No. of Items	Cronbach's Alpha	N of Cases
Fathers	Educational Needs	15	0.9429	98
	Financial Needs	10	0.6109	98
	Social Needs	19	0.8409	98
	Overall of the fathers Questionnaire Scale	44	0.9118	98
Mothers	Educational Needs	15	0.8453	98
	Financial Needs	10	0.5018	98
	Social Needs	19	0.7783	98
	Overall of the fathers Questionnaire Scale	44	0.8530	98
Overall Questionnaire Scale		44	0.8824	196

Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences (IBM SPSS-22). Descriptive statistics (e.g., frequencies, means, standard deviations, ranges, and percentages) were used to analyze the questionnaire data. In addition, inferential statistics, such as one-way ANOVA and two-way ANOVA were used for answering the research questions. A p-value of 0.05 was retained as the level for statistical significance in the analysis.

Ethical Considerations

Two consent agreements were obtained prior to conducting this study. The study was first approved by the University of Louisville's Institutional Review Board (IRB), and then by the Branch of the Ministry of Education for Boys and the Branch of the Ministry of Education for Girls in Saudi Arabia. Participation was voluntary, and the participants were free to drop out of the study at any time. The study guaranteed that the participants' responses on the questionnaire were anonymous and used only for scientific purposes. Consent was obtained from the parents of all the children with multiple disabilities at intellectual education institutes, Al Noor institutes, and Al Amal institutes in Riyadh, Saudi Arabia, using procedures approved by the University of Louisville's IRB. The informed consent document explained the nature of the survey, stated that participation was not compulsory, and assured participant confidentiality. After the research proposal was approved, the researcher travelled to Riyadh for data collection. The informed consent document (Appendix C is the English version and Appendix D is the Arabic version) was given to each participant before administering the questionnaire. Procedures were used to increase the response rates, including a pre-phone call and two follow-up reminder phone calls (Dillman, Smyth, & Christian, 2014).

CHAPTER IV

RESULTS

This chapter reports the findings related to educational, financial, and social needs of 98 families of children with multiple disabilities in Saudi Arabia (both Saudi and non-Saudi), each with at least one child with multiple disabilities. Differences in the needs of these families, based on the parents' demographics (i.e., gender, educational background, financial status) and the child's characteristics (i.e., gender, types of disabilities) are also examined.

Response Rate

The target population for the study consisted of mothers and fathers of children with multiple disabilities residing in the capital city of Riyadh, Saudi Arabia. The survey questionnaire, distributed to 408 fathers and mothers (204 couples) in their homes, asked participants to rate educational, financial, and social needs. The questionnaire was completed by most participants without assistance. However, a few parents were assisted by the researcher, or a member of the data collection team, who read the questions aloud and recorded their responses.

A total of 232 questionnaires were returned, resulting in a 57% response rate. Of these, 36 responses (18 couples) were excluded from the final analysis because the questionnaire was not completed or only partially completed[1]. This resulted in 196 individuals (98 couples) whose responses were used for statistical analysis. All data

[1] Reasons for incomplete or partially completed questionnaires included either the father or mother was not living in the home due to death or separation (n = 13), not enough questions were answered by either or both parents for the questionnaire to be useable for analysis (n = 10), and responses were received from only one parent (n = 13). Because this study is focused on examining the experience of both mothers and fathers, responses received from only one parent were excluded from the analysis.

were logged and checked for accuracy prior to data analysis. IBM SPSS Statistics 22 was used to conduct the data analysis to describe the sample and answer the research questions.

Model of Analysis

Descriptive statistics (mean and standard deviation) were used to interpret the findings of the analysis for research questions one, two, and three (Q1. What are the perceived educational needs of the families (fathers and mothers) of children with multiple disabilities?; Q2. What are the perceived financial needs of the families (fathers and mothers) of children with multiple disabilities?; and Q3. What are the perceived social needs of families (fathers and mothers) of children with multiple disabilities?). One-way and two-way analysis of variance tests (ANOVAs) were performed for questions four and five (Q 4): Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary, based on the parents' gender, education level, and monthly income?, and Q 5): Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary, based on the child's gender, or the child's type of disability?). ANOVAs were performed to test for significant differences between the independent variables, including parent's gender, parent's level of education, parent's monthly income, the gender of the child with multiple disabilities, and the child's type of multiple disabilities. The dependent variables consisted of the three dimensions: educational, financial, and social needs.

Appendix E lists the individual questions that were based on these three dimensions. The responses to the three dimensions is based on a five-point Likert scale, coding the responses as follows: 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, and 5 for Strongly Agree. The scores were based on the three dimensions, and they were combined into a single score per dimension for each

subject. There were two negative coded items in the financial needs dimension (items 24 and 25). These two items were reverse-coded prior to conducting the data analysis. A probability level of p = 0.05 or less was used as the criteria for accepting or rejecting the null hypothesis. Each research question was analyzed for its effect on each of these three subscales. IBM SPSS Statistics 22 was used during the analysis. The findings for each research question are addressed separately.

Description of the Sample

Description of Mothers and Fathers

The demographic characteristics of mothers and fathers of children with multiple disabilities are presented in Table 11.

Age. Overall, the mothers were between 25 and 59 years old (M = 41.67, SD = 7.28) and the fathers were older, between 29 and 68 years old (M = 47.98, SD = 8.15), with majority of the mothers (n = 41, or 41.8%) and fathers (n = 47, or 48%) in their 40s.

Marital Status. Almost all the mothers and fathers (91.8 %, n = 90 mothers and 93.9%, n = 92 fathers) were married, and a few parents reported being divorced (5.1%, n = 5 mothers and 4.1%, n = 4 fathers). There were also a few parents who were separated (3.1%, n = 3 mothers and 2%, n = 2 fathers).

Nationality. Almost 86% (85.7%, n = 84) of the mothers and 92% (91.8%, n = 90) of the fathers stated that were Saudi. Other nationalities included Jordanian (1%, n = 1 mother and 1%, n = 1 father), Syrian (10.2%, n = 10 mothers and 6.1%, n = 6 fathers), and Yemeni (3.1%, n = 3 mothers and 1%, n = 1 father).

Education Level. More mothers had earned a bachelor's degree (29.6%, n = 29) than had fathers (22.4%, n = 22), while more fathers had earned a high school diploma (43.9%, n = 43) than the mothers (22.4%, n = 22). Overall, however, more

fathers than mothers had completed high school or a higher level of education (70.4% vs. 54%), with the remaining responders reporting an educational achievement of less than high school.

Occupational Status. Less than one-third of the mothers (24.4%, n = 24) were employed while over two-thirds of the fathers (70.4%, n = 69) were employed. The primary employers for both mothers and fathers were the government or the private sector.

Family's Monthly Income. Family income (fathers or mothers) ranged from no income to a maximum of 22,000 Saudi Riyals (henceforth referred to as SAR), equivalent to $5,866 per month, with a mean of 5,486 SAR or $1,462, a median of 5,350 SAR or $1,426, and a Standard Deviation of 4,994 SAR or $1,331. The average monthly income for mothers was 2,500 SAR or $666 per month with the median of 0 SAR or $0, and the Standard Deviation was 4,082 SAR or $1,088. The average monthly income for fathers was 8,472 SAR, equivalent to $2,259, the median was 8,000 SAR or $2,133, and the Standard Deviation was 3,933 SAR or $1,048). It is worth noting that nearly two-third of the mothers (65.3%, n = 64) had no monthly income, while all the fathers had some form of income.

Annual Financial Aid from the Government. The amount of financial aid from the Saudi Arabian government for a family of children with multiple disabilities ranged from 0 to 60,000 SAR or $16,000 annually, with an average of 16,668 SAR or $4,444, a median of 20,000 SAR or $5,333, and the Standard Deviation was 7,863 SAR or $2,096.

Annual Financial Aid from Charity Organizations. The amount of financial aid received from charities for a family of children with multiple disabilities ranged from 0 to 15,000 SAR or $4,000 annually, with an average of 576 SAR or $153, a

median of 0 SAR or $0, and the Standard Deviation being 2,130 SAR or $568). Nearly 90% of the mothers and fathers (82 mothers, 86 fathers) did not receive any financial aid from charity organizations.

Attending Training Programs. Seventy-seven mothers (78.6%) and 78 fathers (79.6%) of children with multiple disabilities stated that they had not attended any training programs about parenting disabled children, while 21 mothers (21.4%) and 20 fathers (20.4 %) stated that they had attended one or more programs about parenting disabled children.

Table 11

Demographic Characteristics of the Mothers and the Fathers

Variables		Mothers		Fathers	
		N	%	N	%
AGE (n = 98)	Under 30 years old	5	5.1	1	1.0
	From 30 to under 40 years old	35	35.7	12	12.2
	From 40 to under 50 years old	41	41.8	47	48.0
	From 50 to under 60 years old	17	17.3	27	27.6
	From 60 to under 70 years old	0	0	11	11.2
MARITAL STATUS (n = 98)	Married	90	91.8	92	93.9
	Separated	3	3.1	2	2.0
	Divorced	5	5.1	4	4.1
NATIONALITY (n = 98)	Saudi	84	85.7	90	91.8
	Syrian	10	10.2	6	6.1
	Jordanian	1	1.0	1	1.0
	Yemeni	3	3.1	1	1.0
EDUCATION LEVEL (n = 98)	Did not attend school	14	14.3	7	7.1
	Elementary	14	14.3	6	6.1
	Middle school	17	17.3	16	16.3
	High school	22	22.4	43	43.9
	Bachelor	29	29.6	22	22.4
	Master	0	0	4	4.1
	Other	2	2.0	0	0
OCCUPATIONAL STATUS (n = 98)	Employed with government	17	17.3	51	52.0
	Employed with private company	7	7.1	18	18.4
	Unemployed	30	30.6	4	4.1

	Retired	4	4.1	24	24.5
	Other	40	40.8	1	1.0
FAMILY MONTHLY INCOME (n = 98)	0.0	64	65.3	0	0
	From 1,500 SAR ($400) to less than 6,000 SAR ($1,600)	13	13.3	27	27.6
	From 6,000 SAR ($1,600) to less than 10,000 SAR ($2,666)	14	14.3	42	42.9
	More than 10,000 SAR ($2,666)	7	7.1	29	29.6
ANNUAL FINANCIAL AID FROM THE GOVERNMENT (n = 98)	0.0	8	8.2	8	8.2
	3,600 SAR ($960)	1	1.0	0	0
	8,500 SAR ($2,266)	1	1.0	1	1.0
	10,000 SAR (2,666)	4	4.1	5	5.1
	11,500 SAR ($3,066)	0	0	1	1.0
	12,000 SAR ($3,200)	4	4.1	3	3.1
	14,000 SAR ($3,733)	23	23.5	23	23.5
	15,000 SAR ($4,000)	1	1.0	0	0
	19,200 SAR ($5,120)	0	0	1	1.0
	20,000 SAR ($5,333)	52	53.1	53	54.1
	24,000 SAR ($6,400)	0	0	1	1.0
	28,000 SAR ($7,466)	1	1.0	0	0
	30,800 SAR ($8,213)	1	1.0	0	0
	40,000 SAR ($10,666)	1	1.0	1	1.0
	60,000 SAR ($16,000)	1	1.0	1	1.0
ANNUAL FINANCIAL AID FROM THE CHARITY (n = 98)	0.0	82	83.7	86	87.8
	700 SAR ($187)	1	1.0	1	1.0
	1,000 SAR ($266)	2	2.0	1	1.0
	1,100 SAR ($293)	1	1.0	1	1.0
	1,500 SAR ($400)	1	1.0	1	1.0
	1,800 SAR ($480)	1	1.0	0	0
	2,000 SAR ($533)	3	3.1	3	3.1
	2,500 SAR ($666)	0	0	1	1.0
	3,600 SAR ($960)	1	1.0	1	1.0
	5,000 SAR ($1,333)	2	2.0	1	1.0
	6,000 SAR ($1,600)	1	1.0	1	1.0
	8,000 SAR ($2,133)	1	1.0	0	0
	14,800 SAR ($3,947)	1	1.0	0	0
	15,000 SAR ($4,000)	1	1.0	1	1.0
ATTENDING TRAINING PROGRAM (n = 98)	No	77	78.6	78	79.6
	Yes	21	21.4	20	20.4

Description of the Children with Multiple Disabilities

Number of Children. The number of children in the surveyed families included disabled and non-disabled children ranging from one to ten, with most families having three children, including the child with multiple disabilities (n=25, 25.5%). The average number of children in families was 3.45 (SD=1.75). The demographic characteristics of the children with multiple disabilities are presented in Table 12 and described below.

Number of Children with Multiple Disabilities. Ninety-three couples (94.9%) reported that they had one child with multiple disabilities while five couples (5.1%) reported that they had two children with multiple disabilities in their family.

Gender. Of the 98 children with multiple disabilities, 70 (71.4%) were male and 28 (28.6%) were female.

Age. The children with multiple disabilities were between 6 to 18 years old (mean=14.5, SD= 2.95) with the majority (70.4%, n=69) being 14 years old or older.

Types of Disabilities Experienced. The majority of the children with multiple disabilities (66.3 %, n = 65) had both an intellectual disability and a physical disability. Other multiple-disability conditions included physical disability and blindness (10.2%, n = 10), intellectual disability and deafness (8.2%, n = 8), physical disability and deafness (7.1%, n = 7), intellectual disability and blindness (3.1%, n = 3), blindness and deafness (2%, n = 2), intellectual disability and autism (1%, n = 1), physical disability and autism (1%, n = 1), and blindness and autism (1%, n = 1).

Grade. Fifty-three of the children with multiple disabilities attended elementary school (54.1%), one child was in Kindergarten (1%), and the rest attended middle or high school (45%, n=44).

Educational Program. Parents were asked to identify what educational institutes their children with multiple disabilities attended. As can be noted from Table 9, thirty-seven boys with multiple disabilities (37.8%) attended the Male Intellectual Education Institute in Eastern Riyadh, 15 boys (15.3%) attended the Male Intellectual Education Institute in Western Riyadh, 14 boys (14.3%) attended the Al-Noor Male Institute for the Blind, and five (5.1%) attended the Male Al-Amal Institutes for the Deaf in Eastern Riyadh.

Eighteen (18.4%) girls with multiple disabilities attended the Female Intellectual Education Institute in Eastern Riyadh, five (5.1%) attended the Female Intellectual Education Institute in Western Riyadh, and four (4.1 %) attended the Female Al-Amal Institutes for the Deaf in Western Riyadh.

Table 12

Demographic Characteristics of Children with Multiple Disabilities

Variables		N	%
NUMBER OF CHILDREN IN THE FAMILY (n=98)	One	14	14.3
	Two	14	14.3
	Three	25	25.5
	Four	24	24.5
	Five	11	11.2
	Six	6	6.1
	Seven	1	1.0
	Eight	1	1.0
	Nine	1	1.0
	Ten	1	1.0
NUMBER OF CHILDREN WITH MULTIPLE DISABILITIES IN THE FAMILY (n=98)	One	93	94.9
	Two	5	5.1
GENDER (n=98)	Male	70	71.4
	Female	28	28.6
AGE (n=98)	6 years	1	1.0
	8 years	5	5.1
	9 years	3	3.1
	10 years	4	4.1
	11 years	1	1.0
	12 years	6	6.1

	13 years	9	9.2
	14 years	13	13.3
	15 years	10	10.2
	16 years	19	19.4
	17 years	10	10.2
	18 years	17	17.3
TYPE OF DISABILITIES EXPERIENCED (n=98)	Intellectual disability + Blindness	3	3.1
	Intellectual disability + Deafness	8	8.2
	Intellectual disability + Physical disability	65	66.3
	Blindness + Deafness	2	2.0
	Physical disability + Deafness	7	7.1
	Physical disability + Blindness	10	10.2
	Intellectual disability + Autism	1	1.0
	Physical disability + Autism	1	1.0
	Blindness + Autism	1	1.0
GRADE (n=98)	KG	1	1.0
	1st	5	5.1
	2nd	11	11.2
	3rd	4	4.1
	4th	3	3.1
	5th	13	13.3
	6th	17	17.3
	7th (1st Middle School in Saudi Arabia)	13	13.3
	8th (2nd Middle School in Saudi Arabia)	9	9.2
	9th (3rd Middle School in Saudi Arabia)	11	11.2
	10th (1st High School in Saudi Arabia)	8	8.2
	11th (2st High School in Saudi Arabia)	3	3.1
EDUCATIONAL PROGRAM (n=98)	Male Intellectual Education Institute - western Riyadh	15	15.3
	Female Intellectual Education Institute - western Riyadh	5	5.1
	Male Intellectual Education Institute - eastern Riyadh	37	37.8
	Female Intellectual Education Institute - eastern Riyadh	18	18.4
	Al-Noor Institutes for the Blind-male	14	14.3
	Al-Amal male Institutes for the Deaf - eastern Riyadh	5	5.1
	Al-Amal female Institutes for the Deaf - western Riyadh	4	4.1

Analysis and Answer of the Five Research Questions

Research Question 1

What are the perceived educational needs of the families (fathers and mothers) of children with multiple disabilities?

The participants were asked to identify their educational needs in regard to caring for their child with multiple disabilities. Table 13 indicates their responses (5= strongly agree, 4= agree, 3= neutral, 2= disagree, and 1= strongly disagree) in 15 related need areas. The majority of the responses to the 15 need areas were either *Strongly Agree* or *Agree*. Near or above 50% of the mothers' and fathers' responses indicated that they strongly agreed or agreed with these perceived educational needs.

Table 13

Educational Needs Dimension Parents' Response Percentages

	Statement	Parents	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	SD	Rank*
			N	%	N	%	N	%	N	%	N	%			
1	I need more information to understand my multiple-disability child's disabilities.	Mothers	37	37.8	46	46.9	12	12.2	3	3.1	0	0	4.19	0.769	13
		Fathers	31	31.6	50	51	11	11.2	6	6.1	0	0	4.08	0.821	10
2	I need more information about how to deal with my child with multiple disabilities behavior in general.	Mothers	37	37.8	47	48	11	11.2	3	3.1	0	0	4.20	0.759	11
		Fathers	41	41.8	49	50	3	3.1	5	5.1	0	0	4.29	0.760	8
3	I need more information to know how to deal with my child with multiple disabilities specific behavioral problems.	Mothers	42	42.9	47	48	6	6.1	3	3.1	0	0	4.31	0.724	8
		Fathers	43	43.9	40	40.8	10	10.2	5	5.1	0	0	4.23	0.835	9
4	I need more information on how to help my normal child/children	Mothers	48	49	26	26.5	20	20.4	4	4.1	0	0	4.20	0.908	12
		Fathers	28	28.6	51	52	10	10.2	9	9.2	0	0	4.00	0.873	12

	cope with their multiple disability sibling(s).														
5	I need more training in dealing with the impact of my child's multiple disabilities on his/her sibling(s).	Mothers	45	45.9	32	32.7	19	19.4	2	2	0	0	4.22	0.831	10
		Fathers	21	21.4	50	51	22	22.4	5	5.1	0	0	3.89	0.798	13
6	I need more help in how to explain my child with multiple disabilities condition to his or her sibling(s).	Mothers	42	42.9	32	32.7	20	20.4	3	3.1	1	1	4.13	0.915	14
		Fathers	22	22.4	46	46.9	20	20.4	10	10.2	0	0	3.82	0.901	14
7	I need more training in methods of emergency medical intervention with my multiple-disability child/children.	Mothers	71	72.4	23	23.5	2	2	2	2	0	0	4.66	0.625	6
		Fathers	55	56.1	30	30.6	9	9.2	4	4.1	0	0	4.39	0.820	6
8	I need more training in methods of overall intervention with my child/children with multiple disabilities.	Mothers	69	70.4	27	27.6	0	0	2	2	0	0	4.66	0.591	5
		Fathers	51	52	29	29.6	14	14.3	4	4.1	0	0	4.30	0.864	7
9	I need more information about any program(s) designed to help me to work with my child/children with multiple disabilities.	Mothers	64	65.3	25	25.5	4	4.1	5	5.1	0	0	4.51	0.803	7
		Fathers	64	65.3	26	26.5	2	2	6	6.1	0	0	4.51	0.815	5
10	I need more information on the services that are presently available for my child/children with multiple disabilities.	Mothers	68	69.4	29	29.6	0	0	1	1	0	0	4.67	0.533	3
		Fathers	70	71.4	23	23.5	1	1	4	4.1	0	0	4.62	0.711	3
11	I need more information on services available to my child/children with multiple disabilities from the Ministry of Education.	Mothers	66	67.3	32	32.7	0	0	0	0	0	0	4.67	0.471	2
		Fathers	69	70.4	27	27.6	0	0	2	2	0	0	4.66	0.591	1
12	I need more information	Mothers	65	66.3	33	33.7	0	0	0	0	0	0	4.66	0.475	4

	on services available to my child/children with multiple disabilities from the Ministry of Health.	Fathers	67	68.4	29	29.6	0	0	2	2	0	0	4.64	0.596	2
13	I need more information on services available to my child/children with multiple disabilities from the Ministry of Social Affairs.	Mothers	67	68.4	31	31.6	0	0	0	0	0	0	4.68	0.467	1
		Fathers	64	65.3	32	32.7	0	0	2	2	0	0	4.61	0.603	4
14	I need counseling to how to cope with my child/children with multiple disabilities.	Mothers	43	43.9	42	42.9	6	6.1	7	7.1	0	0	4.23	0.859	9
		Fathers	34	34.7	40	40.8	15	15.3	9	9.2	0	0	4.01	0.936	11
15	I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my child/children with multiple disabilities condition.	Mothers	15	15.3	46	46.9	22	22.4	13	13.3	2	2	3.60	0.971	15
		Fathers	14	14.3	47	48	26	26.5	11	11.2	0	0	3.65	0.863	15
						Min Mean for Mothers							4.38	0.412	
						Min Mean for Fathers							4.25	0.591	

* The rankings were established according to the mean, the highest taking the first place.

The responses to the 15 educational needs items were calculated for a total educational needs score. Table 14reflects the mean scores for both mothers and fathers, which can range from 15 to 75 points, with higher scores indicating a greater level of unmet education needs. The mothers' scores ranged from 40 to 75 with a mean of = 65.63, SD = 6.18. The fathers' scores ranged from 30 to75 with a mean of 63.7 (SD = 6.16). Overall, mothers reported having slightly higher unmet educational needs in comparison to fathers.

Table 14

Mean Levels of Agreement for Mothers and Fathers for Total Scale of Educational Needs Dimension

Gender	N	Minimum	Maximum	Mean	SD
Mothers	98	40	75	65.63	6.18
Fathers	98	30	75	63.70	8.86

Research Question 2

What are the perceived financial needs of the families (fathers and mothers) of children with multiple disabilities?

The participants were asked to identify their financial needs with regard to caring for their child with multiple disabilities. Table 15indicates their responses (strongly agree, agree, neutral, disagree, and strongly disagree) in ten related need areas. The responses were coded on a five-point Likert Scale from 1 to 5, where higher scores indicated more financial needs and lower scores indicated less financial need. The majority of the responses were either *Strongly Agree* or *Agree* in the first eight related need areas, and *Strongly Disagree* or *Disagree* in the last two related need areas. These two needs were reverse-coded prior to conducting the data analysis because they were positively worded. More than two-thirds of the mothers and fathers responded strongly agree or agree with these perceived financial needs.

Table 15

Financial Needs Dimension Parents' Response Percentages

	Statement	Parents	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	DS	Rank**
			N	%	N	%	N	%	N	%	N	%			
1	I need additional financial support from the state to provide better care for my	Mothers	74	75.5	20	20.4	2	2	2	2	0	0	4.69	0.616	4
		Fathers	78	79.6	18	18.4	1	1	1	1	0	0	4.77	0.514	1

	child/children with multiple disabilities														
2	I need additional financial support to secure comfortable, safe, and appropriate transport for my child/children with multiple disabilities.	Mothers	84	85.7	9	9.2	5	5.1	0	0	0	0	4.81	0.511	2
		Fathers	81	82.7	11	11.2	4	4.1	2	2	0	0	4.74	0.631	2
3	I need additional financial support to provide additional educational lessons for my child/children with multiple disabilities at home.	Mothers	64	65.3	24	24.5	3	3.1	7	7.1	0	0	4.48	0.864	7
		Fathers	69	70.4	21	21.4	4	4.1	4	4.1	0	0	4.58	0.759	6
4	I need additional financial support to provide the needs of my child/children with multiple disabilities for treatment and medical care.	Mothers	75	76.5	14	14.3	8	8.2	1	1	0	0	4.66	0.673	6
		Fathers	82	83.7	8	8.2	6	6.1	2	2	0	0	4.73	0.667	3
5	I need additional financial support to provide suitable entertainment for my child/children with multiple disabilities.	Mothers	80	81.6	11	11.2	2	2	5	5.1	0	0	4.69	0.752	5
		Fathers	71	72.4	20	20.4	1	1	5	5.1	1	1	4.58	0.836	7
6	I need additional financial help in paying for expenses of my child/children with multiple disabilities such as food, housing, or clothing.	Mothers	32	32.7	20	20.4	12	12.2	18	18.4	16	16.3	3.35	1.500	8
		Fathers	33	33.7	25	25.5	14	14.3	17	17.3	9	9.2	3.57	1.355	8
7	I need additional financial support to pay for the services of a domestic worker to help take care of my child/children	Mothers	84	85.7	7	7.1	7	7.1	0	0	0	0	4.79	0.561	3
		Fathers	77	78.6	16	16.3	1	1	3	3.1	1	1	4.68	0.741	5

	with multiple disabilities.														
8	I need additional financial help in getting special equipment for child with multiple disabilities needs.	Mothers	86	87.8	10	10.2	1	1	1	1	0	0	4.85	0.462	1
		Fathers	81	82.7	10	10.2	4	4.1	3	3.1	0	0	4.72	0.685	4
9*	The governmental financial support is enough to meet all my child with multiple disabilities needs.	Mothers	3	3.1	8	8.2	4	4.1	36	36.7	47	48	1.82	1.049	9
		Fathers	4	4.1	12	12.2	2	2	30	30.6	50	51	1.88	1.178	9
10*	The charity financial support is enough to meet all my child with multiple disabilities needs.	Mothers	3	3.1	1	1	11	11.2	27	27.6	56	57.1	1.65	0.943	10
		Fathers	5	5.1	3	3.1	8	8.2	28	28.6	54	55.1	1.74	1.078	10
								Min Mean for Mothers					3.98	0.362	
								Min Mean for Fathers					4.00	0.416	

* Positively worded statements

** This ranking was established according to the mean, the highest taking the first place.

The last two items (24 and 25)—one related to government financial aid and the other related to charity financial aid—were reverse scores (strongly agree = 1, agree = 2, neutral = 3, disagree = 4, and strongly disagree = 5). Furthermore, the ten financial needs items were calculated for a total financial needs score. Table 16 indicates the mean total scores for both mothers and fathers. The total scores ranged from 28 to 50 (low = 10 and high = 50), with higher scores indicating a tendency toward a positive response, and low scores indicating a negative response on the establishment of a mandatory financial needs assessment (strongly agree = 5 scores, agree = 4 scores, neutral = 3 scores, disagree = 2 scores, and strongly disagree = 1 score), except for the last two items. The last two items (24 and 25)—one related to government financial aid and the other related to charity financial aid—were reverse scored (strongly agree = 1, agree = 2, neutral = 3, disagree = 4, and strongly disagree

= 5). The mothers' scores ranged from 31 to 49 with a mean of 39.78 (SD = 3.61). The fathers' scores ranged from 28 to 50 with a mean of 40 (SD = 4.15). There was no difference between the mothers and the fathers with regards to identifying unmet financial needs.

Table 16

Mean Levels of Agreement for Mothers and Fathers for Total Scale of Financial Needs Dimension

Gender	N	Minimum	Maximum	Mean	SD
Mothers	98	31	49	39.78	3.61
Fathers	98	28	50	40	4.15

Research Question 3

What are the perceived social needs of families (fathers and mothers) of children with multiple disabilities?

The participants were asked to identify their social needs with regard to caring for their child with multiple disabilities. Table 17indicates their responses (strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1) in 19 related need areas. Their responses were coded on a five-point Likert Scale from 1 to 5, where higher scores indicated more need of social needs and lower scores indicated fewer social needs.

The minority of the responses were either *Strongly Agree* or *Agree* for all 19 social needs categories. Almost more than 50% of the mothers and fathers responded *Strongly Agree* or *Agree* with these social needs, except on item number eight, where 32 (32.7%) mothers responded *Neutral* and 28 (28.6%) fathers responded *Disagree* (28.6%).

Table 17

Social Needs Dimension Parents' Response Percentages

	Statement	Parents	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	DS	Rank*
			N	%	N	%	N	%	N	%	N	%			
1	I need moral support from relatives to help my child/children with multiple disabilities.	Mothers	33	33.7	27	27.6	15	15.3	19	19.4	4	4.1	3.67	1.242	14
		Fathers	26	26.5	33	33.7	15	15.3	17	17.3	7	7.1	3.55	1.253	12
2	I need to have someone in my family that I can talk to more about my problems.	Mothers	26	26.5	19	19.4	29	29.6	20	20.4	4	4.1	3.44	1.202	15
		Fathers	27	27.6	14	14.3	31	31.6	19	19.4	7	7.1	3.36	1.270	14
3	I need to have more friends that I can talk to about my child/children with multiple disabilities.	Mothers	10	10.2	31	31.6	28	28.6	24	24.5	5	5.1	3.17	1.075	18
		Fathers	13	13.3	33	33.7	23	23.5	17	17.3	12	12.2	3.18	1.230	16
4	I need to meet more regularly with a counselor (e.g. psychologist, social worker, psychiatrist) to talk about how to cope with my experiences.	Mothers	26	26.5	49	50	15	15.3	6	6.1	2	2	3.93	0.922	10
		Fathers	30	30.6	38	38.8	17	17.3	7	7.1	6	6.1	3.81	1.137	9
5	I need to have more opportunities to meet and to talk with other parents of children with multiple disabilities.	Mothers	45	45.9	40	40.8	6	6.1	5	5.1	2	2	4.23	0.928	6
		Fathers	28	28.6	45	45.9	14	14.3	10	10.2	1	1	3.91	0.964	7
6	I need more help in explaining my child with multiple disabilities condition to my partner/spouse.	Mothers	16	16.3	34	34.7	25	25.5	14	14.3	9	9.2	3.35	1.185	16
		Fathers	9	9.2	21	21.4	36	36.7	25	25.5	7	7.1	3.00	1.065	17
7	I need more help in explaining my child with multiple disabilities condition to my partner/spouse's family members.	Mothers	19	19.4	26	26.5	30	30.6	14	14.3	9	9.2	3.33	1.208	17
		Fathers	13	13.3	17	17.3	34	34.7	20	20.4	14	14.3	2.95	1.222	18
8	My partner/spouse needs help in accepting our child with multiple	Mothers	17	17.3	18	18.4	32	32.7	18	18.4	13	13.3	3.08	1.266	19
		Fathers	10	10.2	14	14.3	27	27.6	28	28.6	19	19.4	2.67	1.233	19

	disabilities condition.														
9	I need help in explaining my child with multiple disabilities condition to other children (such as my children's friends).	Mothers	24	24.5	62	63.3	2	2	7	7.1	3	3.1	3.99	0.914	9
		Fathers	16	16.3	44	44.9	19	19.4	16	16.3	3	3.1	3.55	1.047	11
10	I need opportunities for social interaction between my child with multiple disabilities and my society (e.g., field trips and visits to public places, the National Day, and so on).	Mothers	83	84.7	14	14.3	1	1	0	0	0	0	4.84	0.398	1
		Fathers	61	62.2	33	33.7	1	1	3	3.1	0	0	4.55	0.675	3
11	My society's perceptions about children's disabilities need to be changed via specialized programs on radio and television.	Mothers	80	81.6	15	15.3	3	3.1	0	0	0	0	4.79	0.482	2
		Fathers	66	67.3	26	26.5	3	3.1	3	3.1	0	0	4.58	0.702	1
12	I need government agencies to involve my child with multiple disabilities in the activities they carry out (e.g., special exhibits, attending sport events.)	Mothers	73	74.5	22	22.4	2	2	1	1	0	0	4.70	0.560	4
		Fathers	62	63.3	30	30.6	5	5.1	1	1	0	0	4.56	0.643	2
13	I need private agencies to involve my child with multiple disabilities in the activities they carry out (e.g., visits the sick in hospital and provide assistance to them)	Mothers	71	72.4	20	20.4	6	6.1	1	1	0	0	4.64	0.646	5
		Fathers	54	55.1	33	33.7	9	9.2	2	2	0	0	4.42	0.745	5
14	I need my society to accept our child/children with multiple disabilities no matter what his/her disability is.	Mothers	72	73.5	26	26.5	0	0	0	0	0	0	4.73	0.444	3
		Fathers	56	57.1	36	36.7	3	3.1	3	3.1	0	0	4.48	0.707	4
15	As care providers for a child with multiple disabilities, I need time to	Mothers	46	46.9	18	18.4	14	14.3	13	13.3	7	7.1	3.85	1.334	12
		Fathers	28	28.6	35	35.7	20	20.4	13	13.3	2	2	3.76	1.075	10

	attend to my own social events.														
16	My family needs help in discussing problems and reaching solutions.	Mothers	24	24.5	43	43.9	22	22.4	7	7.1	2	2	3.82	0.956	13
		Fathers	15	15.3	32	32.7	26	26.5	23	23.5	2	2	3.36	1.067	13
17	My family needs help in learning how to support each other during difficult times.	Mothers	28	28.6	40	40.8	23	23.5	5	5.1	2	2	3.89	0.951	11
		Fathers	17	17.3	26	26.5	30	30.6	23	23.5	2	2	3.34	1.084	15
18	I need help in getting appropriate care for my child/children with multiple disabilities during my work time.	Mothers	50	51	19	19.4	22	22.4	5	5.1	2	2	4.12	1.058	7
		Fathers	28	28.6	40	40.8	16	16.3	14	14.3	0	0	3.84	1.002	8
19	My partner supports me in caring for my child/children with multiple disabilities.	Mothers	47	48	26	26.5	15	15.3	7	7.1	3	3.1	4.09	1.094	8
		Fathers	52	53.1	36	36.7	5	5.1	5	5.1	0	0	4.38	0.806	6
													3.98	0.440	
													3.75	0.518	

* This ranking was established according to the mean, the highest taking the first place.

The responses to the 19 social needs items were added for a total social needs score. Table 18 indicates the mean total scores for both mothers and fathers, which ranged from 52 to 94 (low = 19 and high = 95), with higher scores indicating a tendency toward a positive response and lower scores indicating a negative response on the establishment of a mandatory social needs assessment (strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1). The mothers' scores ranged from 54 to 91 with a mean of 75.66 (SD = 8.36). While the fathers' scores ranged from 52 to 94 with a mean of 71.23 (SD = 9.84). Fathers were slightly less willing to stress all 19 social needs.

Table 18

Mean Levels of Agreement for Mothers and Fathers for Total Scale of Social Needs Dimension

Gender	N	Minimum	Maximum	Mean	SD
Mothers	98	54	91	75.66	8.36
Fathers	98	52	94	71.23	9.84

Research Question 4

Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary based on the parents' gender, education level, and monthly income?

To examine question four, the researcher divided the question into three parts. The first part examines differences depending on the parents' gender (fathers and mothers) and their total scores on each category of the three needs (educational, financial, and social needs) by performing a one-way ANOVA test. This tested three hypotheses:

Hypothesis 1: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the parents' gender (fathers and mothers);

Hypothesis 2: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents' gender (fathers and mothers);

Hypothesis 3: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on social needs based on the parents' gender (fathers and mothers).

To examine these three hypotheses, a one-way ANOVA was performed to test for differences in each of the three dimensions based on the parents' gender, with the related means, standard deviations, effect size, and observed power presented in Table 19. On the first hand, the mean score for the fathers for social needs was 71.23 (SD = 9.84) while that for the mothers was 75.66 (SD = 8.36). This difference between the

parents' gender (fathers and mothers) and their scores regarding the social perceived needs of the families (mothers and fathers) of children with multiple disabilities was significant (F (1,194) = 11.517; p = 0.001), showing a small effect size (partial eta square=0.056), and the observed power for this test was 92%. These results suggest that the perceived social needs of the families (mothers and fathers) of children with multiple disabilities was more important to them than their education and financial needs.

Conversely, the mean scores for the fathers was 63.70 (SD=8.86) on educational needs and 40.01 (SD=4.15) on financial needs. The mean scores for the mothers were 65.63 (SD=6.18) and 39.78 (SD=3.61) for educational and financial needs, respectively. These differences were not significantly different (p = .05) between the parents' gender and their scores for the other two dimensions (educational perceived needs and financial perceived needs). A Scheffe post-hoc test was not conducted to find where the mean differences lay given that there were no significant differences. The assumptions of the ANOVA analyses were examined to ensure that these assumptions were met, including the independence of the observations, the normal distribution and homogeneity of variance, and the lack of statistical outliers for the dependent variables. Finally, a Bonferroni adjustment was made to the level of significance. Since, there was a not statistically significant ($p<0.05$) difference in the first two null hypotheses, they were accepted, and the alternative hypotheses were rejected. As there existed a statistically significant ($p<0.05$) difference in the third null hypothesis, it was rejected, and the alternative hypothesis were accepted.

Table 19

The Results of the "One Way ANOVA" of the Differences between the Responses of the Participants According to Parents' Gender

Dimension	Gender	N	Mean	SD	Level of Significance	Partial Eta Squared (effect size)	Observed Power[a]
Educational perceived needs of the families (mothers and Fathers) of children with multiple disabilities	Fathers	98	63.7041	8.86928	0.079	.016	.420
	Mothers	98	65.6327	6.18009			
Financial perceived needs of the families (mothers and Fathers) of children with multiple disabilities	Fathers	98	40.0102	4.15795	0.687	.001	.069
	Mothers	98	39.7857	3.61626			
Social perceived needs of the families (mothers and Fathers) of children with multiple disabilities	Fathers	98	71.2347	9.84184	**0.001****	.056	.922
	Mothers	98	**75.6633**	8.36776			

a. Computed using alpha = .05

** Sig at p=0.01 and less

Appendix F displays the results of the one-way ANOVA for each item on the three dimensions. The results suggest that there were significant differences between parents' gender (fathers and mothers) and their scores on items 5, 6, 7, and 8 in educational needs, and on items 30, 31, 32, 33, 34, 35, 36, 38, 39, 41, and 42 in social needs. There were no other significant differences observed in the attitudes of the fathers and mothers of children with multiple disabilities with regard to the financial perceived needs of the families (mothers and fathers) of children with multiple disabilities.

The second part of question four examines differences based on the parents' level of education (did not attend school, elementary, middle school, high school, and post high school) and their total scores on each of the three categories of needs (educational, financial, and social needs). Results were calculated using a one-way ANOVA Test. This part included three hypotheses:

Hypothesis 4: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the parents' level of education (did not attend school, elementary, middle school, high school, and post high school);

Hypothesis 5: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents'

level of education (did not attend school, elementary, middle school, high school, and post high school);

Hypothesis 6: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on social needs based on the parents' level of education (did not attend school, elementary, middle school, high school, and post high school).

To examine these three hypotheses, a one-way ANOVA was performed to test for differences in each of the three dimensions based on the parents' level of education with the related means, standard deviations, effect size, and observed power presented in Table 20. Firstly, on the education needs, the mean for the parents of children with multiple disabilities who possessed post-high school education was significantly higher (M = 66.31; SD = 4.89) than the mean of parents at all other levels of education. The mean of high school educated parents was 65.84 (SD = 7.13), the mean of parents with middle school was 63.81 (SD = 8.50), the mean of parents who did not attend school was 62.19 (SD = 10.08), and the mean of parents with only elementary education was 60.15 (SD = 9.62). These differences were significant between the parents' level of education (did not attend school, elementary, middle school, high school, and post high school) and also on the scores of perceived social needs of the families (mothers and fathers) of children with multiple disabilities ($F(4,191) = 3.593$; $p = 0.008$) showing a medium effect size (partial eta square = 0.070). The observed power for this test was 87%. The Tukey's post-hoc test showed that the main difference on perceived needs in education lies between the parents who reported having an elementary education and those who reported having a high school or a post high school degree, suggesting that the perceived educational needs of the

families (mothers and fathers) of children with multiple disabilities are more important than the financial and social needs, based on the parents' level of education.

Conversely, the means for the parents who did not attend school were 39.85 (SD = 3.87) on the scores of financial needs, and 71.76 (SD = 9.74) on the scores of social needs, while the means of the parents who reported only an elementary education were 39.30 (SD = 4.43) for financial needs, and 70.10 (SD = 10.11) for social needs. The means of the parents with middle school degree were 40.12 (SD = 3.18) for financial needs and 74 (SD = 9.28) for social needs. The means of parents who reported having a high school degree were 40.36 (SD = 3.73) for financial needs, and 72.43 (SD = 9.71) for social needs. Finally, the means of parents who reported having a post-high school degree were 39.45 (SD = 4.27) on financial needs, and 76.08 (SD = 8.18) on social needs. These differences were not significant ($p = 0.05$) between the parents' level of education and their scores on the other two dimensions (perceived financial needs and perceived social needs). A Scheffe post-hoc test was not conducted to find where the mean differences lay given that there were no significant differences. The assumptions of the ANOVA analyses were examined to ensure that these assumptions were met, including the independence of the observations, normal distribution and homogeneity of variance, and the lack of statistical outliers for the dependent variables. Finally, a Bonferroni adjustment was made to the level of significance. Since, there was a statistically significant ($p<0.05$) difference in the null hypothesis number 4, it was rejected, and the alternative hypothesis was accepted. There was a not statistically significant ($p<0.05$) difference in the null hypotheses number 5 and 6, they were accepted, and the alternative hypotheses were rejected.

Table 20

The Results of the "One Way ANOVA" of the Differences between the Responses of the Participants According to the Parents' Level of Education

Dimension	Level of education	N	Mean	SD	Level of Significance	Partial Eta Squared (effect size)	Observed Power[a]
Educational perceived needs of the families (mothers and Fathers) of children with multiple disabilities	Did not attend school	21	62.19	10.08	**.008**	.070	.867
	Elementary	20	60.15	9.62			
	Middle school	33	63.81	8.50			
	High school	65	65.84	7.13			
	Post High school	57	66.31	4.89			
Financial perceived needs of the families (mothers and Fathers) of children with multiple disabilities	Did not attend school	21	39.85	3.87	.689	.012	.186
	Elementary	20	39.30	4.43			
	Middle school	33	40.12	3.18			
	High school	65	40.36	3.73			
	Post High school	57	39.45	4.27			
Social perceived needs of the families (mothers and Fathers) of children with multiple disabilities	Did not attend school	21	71.76	9.74	.069	.044	.642
	Elementary	20	70.10	10.11			
	Middle school	33	74	9.28			
	High school	65	72.43	9.71			
	Post High school	57	76.08	8.18			

a. Computed using alpha = .05
** Sig at p=0.01 and less

For further clarification, two new hypotheses were proposed:

Hypothesis 4.1: There will be no difference in the total scores of the fathers of children with multiple disabilities on educational needs based on their various levels of education (did not attend school, elementary, middle school, high school, and post high school);

Hypothesis 4.2: There will be no difference in the total scores of the mothers of children with multiple disabilities on educational needs based on their various levels of education (did not attend school, elementary, middle school, high school, and post high school).

A one-way ANOVA was performed to examine these two hypotheses, and test for differences in the educational dimension based on the fathers' and mothers' level of education separately, with the related means, standard deviations, effect size, and

observed power presented in Table 21. In the first instance, the mothers with high a school degree had significantly higher mean scores for education needs (M = 68.27; SD = 3.70) compared to the mothers who reported having a post high school degree (M = 66.41; SD = 4.86), those with only a middle school education (M = 66.23; SD = 5.66), those who did not attend school (M = 63.50; SD = 9.89), and those with an elementary school education (M = 61.14; SD=5.51). The differences between the mothers' level of education (did not attend school, elementary, middle school, high school, and post high school) were significant, as were the scores for mothers' perceived education needs (F (4,93) = 3.835; p = 0.006), showing a large effect size (partial eta square = 0.142), and the observed power for this test was 88%. The Tukey's post-hoc test revealed that the main difference in perceived educational needs lay between the mothers with only elementary degree and those with a high school degree, or those who reported having a post high school degree on their scores of perceived educational needs. These results suggest that educational perceived needs are more important for the mothers of children with multiple disabilities than for the fathers, based on their level of education.

Second, the mean scores for the fathers with post high school degree were significantly higher in terms of their education needs (M = 66.19; SD = 5.03) compared to those with a high school degree (M = 64.60; SD = 8.13), those with a middle school degree (M = 61.25; SD = 10.31), those who did not attend school (M = 59.57; SD = 10.70), and those with an elementary school degree (M = 57.83; SD = 16.24). The differences were not significant (F (4,93) = 2.05; p = 0.094) between the fathers' level of education and their scores on the education perceived needs. Since there was no statistically significant ($p<0.05$) difference in the null hypothesis number 4.1, it was accepted, and the alternative hypothesis was rejected. However, there was

a statistically significant ($p<0.05$) difference in the null hypothesis number 4.2, and it was rejected, and the alternative hypothesis was accepted.

Table 21

The Results of the "One Way ANOVA" of the Differences between the Fathers and Mothers in the Educational perceived needs According to their Level of Education

Dimension	Level of education	N	Mean	SD	Level of Significance	Partial Eta Squared (effect size)	Observed Power[a]
Educational perceived needs of the Fathers children with multiple disabilities	Did not attend school	7	59.57	10.70	.094	.081	.592
	Elementary	6	57.83	16.24			
	Middle school	16	61.25	10.31			
	High school	43	64.60	8.13			
	Post High school	26	66.19	5.03			
Educational perceived needs of the mothers of children with multiple disabilities	Did not attend school	14	63.5	9.89	**.006**	.142	.881
	Elementary	14	61.14	5.51			
	Middle school	17	66.23	5.66			
	High school	22	**68.27**	3.70			
	Post High school	31	66.41	4.86			

Appendix G displays the results of the one-way ANOVA for each item on the three dimensions. The table on appendix G suggests that there was a significant difference observed on the three perceived needs of the families (mothers and fathers) of children with multiple disabilities: items 1, 2, 3, 4, 7, 14, and 15 in educational needs, items 16, 21, and 24 in financial needs, and items 28 and 29 in social needs.

The third part of question four referred to differences based on the parents' monthly income (from one SAR to less than 6,000 SAR, from 6,000 SAR to less than 10,000 SAR, and more than 10,000 SAR). Their total scores for all three needs (educational, financial, and social needs) were examined using a one-way ANOVA. This part included three hypotheses:

Hypothesis 7: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the

parents' monthly income (from one SAR to less than 6,000 SAR, from 6,000 SAR to less than 10,000 SAR, and more than 10,000 SAR);

Hypothesis 8: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents' monthly income (from one SAR to less than 6,000 SAR, from 6,000 SAR to less than 10,000 SAR, and more than 10,000 SAR);

Hypothesis 9: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on social needs based on the parents' monthly income (from one SAR to less than 6,000 SAR, from 6,000 SAR to less than 10,000 SAR, and more than 10,000 SAR).

To examine these three hypotheses, three one-way ANOVAs were performed to test for differences in each of the three dimensions—the test was run for each dimension separately—based on the parents' monthly income, with the related means, standard deviations, effect size, and observed power presented in Table 22. The means scores were not significantly different ($p = 0.05$) between the parents' monthly income and their scores on the three dimensions (educational perceived needs ($F(2,129) = 0.365$; $p = 0.695$), financial perceived needs ($F(2,129) = 0.232$; $p = 0.794$), and social perceived needs ($F(2,129) = 1.456$; $p = 0.237$). A Scheffe post-hoc test was not conducted as there were no significant differences. The assumptions of the ANOVA analyses were examined to ensure that they were met, including the independence of observations, normal distribution and homogeneity of variance, and the lack of statistical outliers for the dependent variables. Finally, a Bonferroni adjustment was made to the level of significance. Since there was no statistically significant ($p<0.05$) difference in the null hypotheses number 7, 8, and 9, they were accepted, and the alternative hypotheses were rejected.

Table 22

The Results of the "One Way ANOVA" of the Differences between the Responses of the Participants According to the Parents' Monthly Income

Dimension	Parents' monthly income level	N	Mean	SD	Level of Significance	Partial Eta Squared (effect size)	Observed Power[a]
Educational perceived needs of the families (mothers and Fathers) of children with multiple disabilities	From 1 SAR to less than 6,000 SAR	40	64.22	9.60	.695	.006	.108
	From 6,000 SAR to less than 10,000SAR	56	63.30	8.66			
	More than 10,000SAR	36	64.77	6.01			
Financial perceived needs of the families (mothers and Fathers) of children with multiple disabilities	From 1 SAR to less than 6,000 SAR	40	39.85	4.15	.794	.004	.086
	From 6,000 SAR to less than 10,000 SAR	56	40.14	3.33			
	More than 10,000 SAR	36	39.58	4.37			
Social perceived needs of the families (mothers and Fathers) of children with multiple disabilities	From 1 SAR to less than 6,000 SAR	40	74.62	10.56	.237	.022	.307
	From 6,000 SAR to less than 10,000 SAR	56	71.69	9.76			
	More than 10,000 SAR	36	71.27	8.25			

a. Computed using alpha = .05
** Sig at p=0.01 and less

Appendix H displays results of the one-way ANOVA for each item on the three dimensions. Table in the Appendix H shows that there was a significant difference between the fathers and mothers for item 17 on financial needs. There were no other significant differences observed in the attitudes of the fathers and mothers of children with multiple disabilities in terms of the other perceived needs (educational and social needs items) of the families (mothers and fathers) of children with multiple disabilities.

Research Question 5

Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary based on the child's gender, or child's disability type?

To examine question five, the researcher divided Question 5 into two parts. The first part included the parents' gender (male and female) and the child with

multiple disabilities gender (male and female). The scores of the fathers and mothers of children with multiple disabilities for each three needs (educational, financial, and social needs) were determined by running three two-way ANOVAs. One test was used for each dimension (the independent variable was the gender of the parents of child with multiple disabilities, and the gender of the child with multiple disabilities, and the dependent variable was the total scores of the fathers and mothers of children with multiple disabilities for each need). The use of two-way ANOVAs allowed the researcher to compare the means of multiple groups, in addition to identifying any interaction effects between the variables. This part included three hypotheses:

Hypothesis 1: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the parents' gender (father and mother) and the multiple-disability child's gender (male and female).

Hypothesis 2: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents' gender (father and mother) and multiple-disability child's gender (male and female).

Hypothesis 3: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on social needs based on the parents' gender (father and mother) and multiple-disability child's gender (male and female).

To examine these three hypotheses, three separate two-way ANOVAs were performed to assess whether differences exist in the children with multiple disabilities parents' perceived needs (dependent variables) and the interaction between the gender of the parents of child with multiple disabilities (the first independent variable) and the gender of the child with multiple disabilities (the second independent variable). The assumptions of the ANOVA were examined to ensure that these assumptions

were met, including the independence of the observations, normal distribution and homogeneity of variance, and the lack of statistical outliers for the dependent variables. Finally, a Bonferroni adjustment was made to the level of significance.

Testing Hypothesis 1: Fathers' and Mothers' Education Needs Scores by Parents' Gender and Child's with Multiple Disabilities Gender.

The perceived educational needs scores of the families (mothers and fathers) of children with multiple disabilities were analyzed using a two way between-subjects ANOVA—see SPSS results in Appendix I—with two levels of parents' gender (father and mother) and two levels of child's gender (male and female). All effects were found to be statistically not significant. Each of the three components will be examined in the following paragraphs.

The p-value obtained from the procedure relating to parents' gender was not significant (0.191). This was greater than the alpha level of 0.05. Therefore, the decision was made not to reject null hypothesis number one regarding no difference attributed to the parents' gender. It was consequently inferred that, in the population from which this sample was drawn, the means of the two groups were the same. Statistically, one group had the same score as the other. That is, the scores for fathers' educational needs were the same as those for mothers' educational needs.

The p-value obtained from the procedure relating to the child's gender was 0.244. This was greater than the alpha level of 0.5. Therefore, the decision was made to also accept the null hypothesis number one regarding no difference attributed to the child's gender. Thus, it was inferred that, in the population from which this sample was drawn, the means of the two groups were the same. One group had a statistically identical score to the other; fathers' educational needs and mothers' educational needs had the same scores.

The p-value obtained from the procedure relating to the interaction between parents' gender and child's gender was 0.509. This was greater than the alpha level of 0.05. Therefore, the decision was made not to reject the null hypothesis number one regarding no difference attributed to the interaction between the parents' and child's genders. It was thus inferred that, in the population from which this sample was drawn, the means of the two parents' gender groups across the two child's gender groups maintained the same relative educational perceived needs. Statistically, each group had almost the same educational perceived needs score according to the child's gender.

The descriptive statistics used in this analysis are presented in Table 23. This is followed by Table 24, in which results of the two-way ANOVAs are arrayed. Table 22 represents the three elements that were compared in the two-way ANOVA: the impact of parents' gender, the impact of child's gender, and the interaction of the two.

Table 23

Descriptive Statistics Table for Main Effects of Fathers and Mothers Education Needs Scores by Parents' Gender and Child's with Multiple Disabilities Gender

Descriptive Statistics

Dependent Variable: Father's and Mother's total Education needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Deviation	N
male	Male	63.0714	9.92628	70
	Female	65.2857	5.21293	28
	Total	63.7041	8.86928	98
female	Male	65.4571	6.54236	70
	Female	66.0714	5.24883	28
	Total	65.6327	6.18009	98
Total	Male	64.2643	8.46118	140
	Female	65.6786	5.19828	56
	Total	64.6684	7.68530	196

Table 24

Two-Way ANOVA Between-Subject Test Results for Fathers and Mothers Education Needs Scores by Parents' Gender and Child's with Multiple Disabilities Gender

Tests of Between-Subjects Effects

Dependent Variable: Father's and Mother's total Education needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	287.858[a]	3	95.953	1.641	.181	.025	4.922	.426
Intercept	675405.845	1	675405.845	11547.881	.000	.984	11547.881	1.000
Parents Gender	100.580	1	100.580	1.720	.191	.009	1.720	.257
child with multiple disabilities Gender	80.008	1	80.008	1.368	.244	.007	1.368	.214
Parents Gender * child with multiple disabilities Gender	25.600	1	25.600	.438	.509	.002	.438	.101
Error	11229.586	192	58.487					
Total	831189.000	196						
Corrected Total	11517.444	195						

a. R Squared = .025 (Adjusted R Squared = .010)

b. Computed using alpha = .05

Testing Hypothesis 2: Fathers' and Mothers' Financial Needs Scores According Parents' Gender and Child's with Multiple Disabilities Gender

The financial perceived needs scores of the families (mothers and fathers) of children with multiple disabilities were analyzed with a two-way between-subjects ANOVA—see SPSS results in Appendix J—with two levels of parents' gender (father and mother) and two levels of child's gender (male and female). The effects of parents' and child's genders were found to be statistically not significant, while the effect of the interaction between parents' and child's gender was statistically significant. Each of the three components will be examined in the following paragraphs.

The p-value obtained from the procedure relating to the parents' gender was not significant (0.210). As this was greater than the alpha level of 0.05, however, the decision was made not to reject null hypothesis number two regarding no difference attributed to the parents' gender. Consequently, it was inferred that, in the population from which this sample was drawn, the means of the two groups were the same. Statistically, one group had the same score as the other, as fathers' and mothers' financial needs scores were the same.

The p-value obtained from the procedure relating to the child's gender was 0.313. This was greater than the alpha level of 0.5, and thus the decision was made to accept null hypothesis number two regarding no difference attributed to the child's gender. It was thus inferred that, in the population from which this sample was drawn, the means of the two groups were the same. Statistically, one group had the same score as the other. Fathers' financial needs scored the same as the mothers' financial needs score.

The p-value obtained from the procedure relating to the interaction between the parents' and child's gender was significant (F = (1,192) =4.30, p = 0.039; partial Eta squared = 0.022), indicating a small effect with 54% power. Therefore, the decision was made to reject null hypothesis number two regarding no difference attributed to the interaction between parents' and child's gender.

The descriptive statistics used by this analysis are presented in Table 25. This is followed by Table 26, in which the two-way ANOVA results are arrayed. Table 26 represents the three elements that are compared in the two-way ANOVA: the impact of parents' gender, the impact of child's gender, and the interaction of the two.

Table 25

Descriptive Statistics Table for Main Effects of Parents' Gender and Child's with Multiple Disabilities Gender on Fathers and Mothers Financial Needs Scores

Descriptive Statistics

Dependent Variable: Father's and Mother's total Financial needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Deviation	N
Male	Male	39.4714	4.41907	70
	Female	41.3571	3.09377	28
	Total	40.0102	4.15795	98
Female	Male	39.9714	3.62748	70
	Female	39.3214	3.61123	28
	Total	39.7857	3.61626	98
Total	Male	39.7214	4.03593	140
	Female	40.3393	3.48648	56
	Total	39.8980	3.88815	196

Table 26

Two-Way ANOVA Between-Subject Test Results for Parents' Gender and Child's with Multiple Disabilities Gender on Fathers and Mothers Financial Needs Scores

Tests of Between-Subjects Effects

Dependent Variable: Father's and Mother's total Financial needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	15.148[a]	5	3.030	.198	.963	.005	.989	.096
Intercept	200230.485	1	200230.485	13067.461	.000	.986	13067.461	1.000
Child Type of disability	12.144	2	6.072	.396	.673	.004	.793	.113
Parents Gender	.000	1	.000	.000	.996	.000	.000	.050
Child Type of disability * Parents Gender	2.133	2	1.066	.070	.933	.001	.139	.060
Error	2880.692	188	15.323					
Total	312097.000	194						
Corrected Total	2895.840	193						

a. R Squared = .005 (Adjusted R Squared = -.021-)
b. Computed using alpha = .05

Table 27 shows that the main effect of the interaction between parents' gender and child's gender is significant in this two-way ANOVA. Fathers parenting a boy with multiple disabilities had a mean financial needs score of 39.47 with a standard error of 0.46, while fathers parenting a girl with multiple disabilities had a mean financial needs score of 41.36 with a standard error of 0.73. In comparison, mothers parenting a boy with multiple disabilities had a mean financial needs score of 40 with a standard error of 0.46, while mothers parenting a girl with multiple disabilities had a mean financial needs score of 39.32 with a standard error of 0.73.

Table 27

Two-Way ANOVA Between-Subject Test Results for the Interaction between Parents' Gender and Child's Gender on Fathers' and Mothers' Financial Needs Scores

Estimated Marginal Means

3. Parents Gender * 7.1 What is your child with multiple disabilities gender?

Dependent Variable: Father's and Mother's total Financial needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Male	Male	39.471	.462	38.561	40.382
	Female	41.357	.730	39.917	42.797
Female	Male	39.971	.462	39.061	40.882
	Female	39.321	.730	37.881	40.762

Based on the comparison of means, the data indicated that fathers parenting girls with multiple disabilities have a higher mean financial needs score than mothers parenting girls with multiple disabilities (41.36 ± 0.73 vs. 39.32 ± 0.73). This produced a significant mean difference of 2.04.

Testing Hypothesis 3: Fathers' and Mothers' Social Needs Scores by Parents' Gender and Child's with Multiple Disabilities Gender

The social perceived needs scores of the families (mothers and fathers) of children with multiple disabilities were analyzed using a two-way between-subjects ANOVA—see SPSS results in Appendix K—with two levels of parents' gender (father and mother) and two levels of child's gender (male and female). The effect of the parents' gender was found to be statistically significant, while the effect of the child's gender and the effect of the interaction between the parents' gender and the child's gender were not statistically significant. Each of the three components will be examined in the following paragraphs.

The p-value obtained from the procedure relating to the parents' gender was significant ($F(1,192) = 7.54$, $p = 0.007$; partial Eta squared= 0.038), indicating a small effect with 78% power. Therefore, the decision was made to reject null hypothesis number three regarding no difference attributed to the parents' gender. It was consequently inferred that there would be a difference in the total scores of the fathers and mothers on social needs based on parents' gender (father and mother), with the difference unrelated to the child with multiple disabilities gender (male and female).

The p-value obtained from the procedure relating to the child's gender was not significant ($p = 0.669$). This was greater than the alpha level of 0.5, so the decision was made to accept null hypothesis number three regarding no difference attributed to child's gender. Consequently, it was inferred that, in the population from which this

sample was drawn, the means of the two groups were the same. Statistically, one group had the same score as the other, that is, fathers' and mothers' social needs scores were the same.

The p-value obtained from the procedure relating to the interaction between the parents' and the child's gender was not significant ($p = 0.470$). Therefore, the decision was made to also accept null hypothesis number three regarding no difference attributed to the interaction between the parents' and the child's gender.

The descriptive statistics used by this analysis are presented in Table 28, followed by Table 29, in which the two-way ANOVA results are listed. Table 29 represents the three elements that are compared in the two-way ANOVA: the impact of the parents' gender, the impact of the child's gender, and the interaction of the two.

Table 28

Descriptive Statistics Table for Main Effects of Parents' Gender and Child's Gender on Fathers' and Mothers' Social Needs Scores

Descriptive Statistics

Dependent Variable: Fathers' and Mothers' total Social needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Deviation	N
Male	Male	70.7571	9.91184	70
	Female	72.4286	9.73892	28
	Total	71.2347	9.84184	98
Female	Male	75.7857	8.50727	70
	Female	75.3571	8.15232	28
	Total	75.6633	8.36776	98
Total	Male	73.2714	9.54267	140
	Female	73.8929	9.02054	56
	Total	73.4490	9.37768	196

Table 29

Two-Way ANOVA Between-Subject Test Results for Parents' Gender and Child's Gender on Fathers' and Mothers' Social Needs Scores

Tests of Between-Subjects Effects

Dependent Variable: Fathers' and Mothers' total Social needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	1020.547[a]	3	340.182	4.050	.008	.060	12.149	.837
Intercept	866293.080	1	866293.080	10313.049	.000	.982	10313.049	1.000
Parents Gender	633.161	1	633.161	7.538	.007	.038	7.538	.780
Child with multiple disabilities Gender	15.447	1	15.447	.184	.669	.001	.184	.071
Parents Gender * child with multiple disabilities Gender	44.100	1	44.100	.525	.470	.003	.525	.111
Error	16127.943	192	84.000					
Total	1074520.000	196						
Corrected Total	17148.490	195						

a. R Squared = .060 (Adjusted R Squared = .045)

b. Computed using alpha = .05

Table 30 shows that the main effect of the parents' gender was significant in the two-way ANOVA. Mothers of children with multiple disabilities had a mean social needs score of 75.57 with a standard error of 1.025, while fathers of children with multiple disabilities had a mean score of 71.6 with a standard error of 1.025.

Table 30

Two-Way ANOVA Between-Subject Test Results for Parents' Gender on Fathers' and Mothers' Social Needs Scores

Estimated Marginal Means

Parents Gender

Dependent Variable: Fathers' and Mothers' total Social needs scores

Parents Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	71.593	1.025	69.572	73.614
Female	75.571	1.025	73.550	77.593

Based on a comparison of the means, the data indicated that mothers of children with multiple disabilities had a higher mean social needs score than fathers of children with multiple disabilities (75.57 ± 1.025 vs. 71.59 ± 1.025). This produced a significant difference in the mean scores of 3.98.

The second part of Question 5 examined the differences based on the gender of the parents of children with multiple disabilities (male and female) and the child's

type of disability (intellectual disability + other type of disability, blindness + other type of disability, and deafness + other type of disability). Additionally, examined were the fathers' and mothers' total scores for each of the three needs (educational, financial, and social) using three two-way ANOVAs; one test for each dimension (the independent variables were parents of child with multiple disabilities gender and child's type of disabilities, and the dependent variable was fathers' and mothers' total scores for each need). This part of Question 5 included three hypotheses:

Hypothesis 4: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the parents' gender (male and female) and the child's type of disability (intellectual disability + other type of disability, blindness + other type of disability, and deafness +other type of disability).

Hypothesis 5: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents' gender (male and female) and the child's type of disability (intellectual disability + other type of disability, blindness + other type of disability, and deafness + other type of disability).

Hypothesis 6: There will be no difference in the total scores of the fathers and mothers of children with multiple disabilities on social needs based on the parents' gender (male and female) and the child's type of disability (intellectual disability + other type of disability, blindness + other type of disability, and deafness + other type of disability).

A two-way ANOVA was used to examine these three hypotheses and to assess whether there were differences in the perceived needs of the parents of children with multiple disabilities (dependent variables), the interaction between the gender of the

parents of child with multiple disabilities (independent variable #1), and the type of disabilities of the child with multiple disabilities (independent variable #2). The assumptions of the ANOVA analyses were examined to ensure that these assumptions were met, including the independence of the observations, normal distribution and homogeneity of variance, and the lack of statistical outliers for the dependent variables. Finally, a Bonferroni adjustment was made to the level of significance.

Testing Hypothesis 4: Fathers' and Mothers' Education Needs Scores by Parents' Gender and Child's Type of Disability.

The educational perceived needs scores of the families (mothers and fathers) of children with multiple disabilities were analyzed using a two-way between-subjects ANOVA—see SPSS results in Appendix L—with two levels of parents' gender (father and mother) and three levels of child's type of disability (intellectual disability+ other type of disability, blindness +other type of disability, and deafness +other type of disability). The effect of the parents' gender and the effect of the interaction between the parents' gender and the child's type of disability were not found to be statistically significant, while the effect of the child's type of disability was statistically significant. Each of the three components will be examined in the following paragraphs.

The p-value obtained from the procedure relating to the child's type of disability was significant ($F(2,188) = 6.66$, $p = 0.002$; partial Eta squared = 0.066), indicating a medium effect with 91% power by using the Bonferroni multiple comparison test. Therefore, the decision was made to reject null hypothesis number 4 regarding no difference attributed to the child's type of disability. Consequently, it was inferred that there would be a difference in the total scores of the fathers and mothers on educational needs based on the child's type of disability, with the

difference unrelated to the gender of the parents of child with multiple disabilities (father and mother).

The p-value obtained from the procedure relating to the parents' gender was not significant ($p = 0.469$). This was greater than the alpha level of 0.5. Therefore, the decision was made to accept null hypothesis number 4 regarding no difference attributed to the parents' gender. It was consequently inferred that, in the population from which this sample was drawn, the means of the two groups were the same. Statistically, one group had the same score as the other, that is, the fathers and mothers scored the same on educational needs.

The p-value obtained from the procedure relating to the interaction between the parents' gender and the child's type of disability was not significant ($p = 0.417$). Therefore, the decision was made to accept null hypothesis number 4 regarding no difference attributed to the interaction between the parents' gender and the child's type of disability.

The descriptive statistics used by this analysis are presented in Table 31. This is followed by Table 32, in which the results of the two-way ANOVA are arrayed. Table 32 represents the three elements that are compared in the two-way ANOVA: the impact of the parents' gender, the impact of the child's gender, and the interaction of the two.

Table 31

Descriptive Statistics Table for Main Effects of Parents' Gender and Child's Type of Disability on Fathers' and Mothers' Educational Needs Scores

Descriptive Statistics

Dependent Variable: Father's and Mother's total Education needs scores

child with multiple disabilities Type of Disabilities	Parents Gender	Mean	Std. Deviation	N
Intellectual + Other	Father	61.9091	9.57357	66
	Mother	64.8485	6.98403	66
	Total	63.3788	8.47676	132
Blindness + Other	Father	66.6250	6.25966	16
	Mother	66.0625	3.45386	16
	Total	66.3437	4.98132	32
Deafness + Other	Father	68.2000	5.44059	15
	Mother	68.7333	3.43234	15
	Total	68.4667	4.47779	30
Total	Father	63.6598	8.90445	97
	Mother	65.6495	6.20994	97
	Total	64.6546	7.72113	194

Table 32

Two-Way ANOVA Between-Subject Test Results for Parents' Gender and Child's Type of Disability on Fathers' and Mothers' Educational Needs Scores

Tests of Between-Subjects Effects

Dependent Variable: Father's and Mother's total Education needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	1031.901[a]	5	206.380	3.704	.003	.090	18.522	.927
Intercept	544338.354	1	544338.354	9770.479	.000	.981	9770.479	1.000
Child Type of disability	742.115	2	371.057	6.660	.002	.066	13.320	.910
Parents Gender	29.343	1	29.343	.527	.469	.003	.527	.112
Child Type of disability * Parents Gender	97.781	2	48.890	.878	.417	.009	1.755	.200
Error	10473.960	188	55.713					
Total	822469.000	194						
Corrected Total	11505.861	193						

a. R Squared = .090 (Adjusted R Squared = .065)
b. Computed using alpha = .05

Tables 33 and 34 showed that the main effect of the child's type of disability was significant in this two-way ANOVA. Families (mothers and fathers) of children with multiple disabilities, who have children with deafness + other type of disability, had a mean education needs score of 68 with a standard error of 1.36. Families (mothers and fathers) of children with multiple disabilities who have children deafness + other type of disability had a mean education needs score of 66.34 with a standard error of 1.31. Families (mothers and fathers) of children with multiple

disabilities who have children with intellectual disability + other type of disability had a mean social needs score of 63.38 with a standard error of 0.65.

Table 33

Two-Way ANOVA Between-Subject Test Results for Child's Type of Disability on Fathers' and Mothers' Educational Needs Scores

Estimated Marginal Means
Child with Multiple Disabilities Type of Disabilities

Dependent Variable: Father's and Mother's total Education needs scores

Child with Multiple Disabilities Type of Disabilities	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Intellectual + Other	63.379	.650	62.097	64.660
Blindness + Other	66.344	1.319	63.741	68.947
Deafness + Other	68.467	1.363	65.778	71.155

Table 34

Post Hoc Tests Results for Child's Type of Disability on Fathers' and Mothers' Educational Needs Scores

Post Hoc Tests
Child with Multiple Disabilities Type of Disabilities
Multiple Comparisons

Dependent Variable: Father's and Mother's total Education needs scores
Bonferroni

(I) Child with Multiple Disabilities Type of Disabilities	(J) Child with Multiple Disabilities Type of Disabilities	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intellectual + Other	Blindness + Other	-2.9650-	1.47074	.136	-6.5177-	.5878
	Deafness + Other	-5.0879-*	1.50969	.003	-8.7347-	-1.4411-
Blindness + Other	Intellectual + Other	2.9650	1.47074	.136	-.5878-	6.5177
	Deafness + Other	-2.1229-	1.89687	.793	-6.7050-	2.4591
Deafness + Other	Intellectual + Other	5.0879*	1.50969	.003	1.4411	8.7347
	Blindness + Other	2.1229	1.89687	.793	-2.4591-	6.7050

Based on observed means.
The error term is Mean Square (Error) = 55.713.
*. The mean difference is significant at the .05 level.

Based on a comparison of the means, the families (mothers and fathers) of children with multiple disabilities who have children with deafness + other type of disability (M = 68.47, SD = 4.48) achieved significantly higher educational perceived needs scores than those with children with an intellectual disability + other type of disability (M = 63.38, SD = 8.48). The differences could also seen in the educational

perceived needs scores of the families (mothers and fathers) of children with multiple disabilities with deafness + other type of disability and those with children with blindness + other type of disability (M=66.34, SD=4.98).

Testing Hypothesis 5: Fathers' and Mothers' Financial Needs Scores by Parents' Gender and Child' Type of Disability

The financial perceived needs scores of the families (mothers and fathers) of children with multiple disabilities were analyzed using a two-way between-subjects ANOVA—see SPSS results in Appendix M—with two levels of parents' gender (father and mother), and three levels of child's type of disability (intellectual disability+ other type of disability, blindness +other type of disability, and deafness +other type of disability). The effects of the parents' gender, the child's type of disability, and the interaction between the two were not found to be statistically significant. Each of the three components will be examined in following paragraphs.

The p-value obtained from the procedure relating to the child's type of disability was not significant ($F(2,188) = 0.396$, $p = 0.673$). Therefore, the decision was made to accept null hypothesis 5 regarding no difference attributed to the child's type of disability. It was thus inferred that there would be no difference in the total scores of the fathers and mothers on financial needs based on the child's type of disability.

The p-value obtained from the procedure relating to the parents' gender was also not significant ($F(1,188) = 0.000$, $p = 0.996$). This was greater than the alpha level of 0.5. Therefore, the decision was made to accept null hypothesis 5 regarding no difference attributed to the parents' gender. Consequently, it was inferred that there would be no difference in the total scores of the fathers and mothers on financial needs based on the child's type of disability.

The p-value obtained from the procedure relating to the interaction between the parents' gender and the child's type of disability was not significant (F (2,188) = 0.070, p = 0.933). Therefore, the decision was made to accept null hypothesis 5 regarding no difference attributed to the interaction between the parents' gender and the child's type of disability.

The descriptive statistics used by this analysis are presented in Table 35, followed by Table 36, in which the two-way ANOVA results are arrayed. Table 36 represents the three elements that are compared in the two-way ANOVA: the impact of the parents' gender, the impact of child's type of disability, and the interaction of the two.

Table 35

Descriptive Statistics Table for Main Effects of Parents' Gender and Child's Type of Disability on Fathers' and Mothers' Financial Needs Scores

Descriptive Statistics

Dependent Variable: Father's and Mother's total Financial needs scores

Child's with Multiple Disabilities Type of Disabilities	Parents Gender	Mean	Std. Deviation	N
Intellectual + Other	Father	39.9242	4.31210	66
	Mother	39.6667	3.48329	66
	Total	39.7955	3.90681	132
Blindness + Other	Father	39.7500	2.86356	16
	Mother	40.0625	2.90904	16
	Total	39.9062	2.84389	32
Deafness + Other	Father	40.5333	4.89704	15
	Mother	40.4667	4.61158	15
	Total	40.5000	4.67385	30
Total	Father	39.9897	4.17456	97
	Mother	39.8557	3.56777	97
	Total	39.9227	3.87355	194

Table 36

Two-Way ANOVA Between-Subject Test Results for Parents' Gender and Child's Type of Disability on Fathers' and Mothers' Financial Needs Scores

Tests of Between-Subjects Effects

Dependent Variable: Father's and Mother's total Financial needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	15.148[a]	5	3.030	.198	.963	.005	.989	.096
Intercept	200230.485	1	200230.485	13067.461	.000	.986	13067.461	1.000
Child Type of disability	12.144	2	6.072	.396	.673	.004	.793	.113
Parents Gender	.000	1	.000	.000	.996	.000	.000	.050
Child Type of disability * Parents Gender	2.133	2	1.066	.070	.933	.001	.139	.060
Error	2880.692	188	15.323					
Total	312097.000	194						
Corrected Total	2895.840	193						

a. R Squared = .005 (Adjusted R Squared = -.021-)

b. Computed using alpha = .05

Testing Hypothesis 6: Fathers' and Mothers' Social Needs Scores by Parents' Gender and Child's Type of Disability

The social perceived needs scores of the families (mothers and fathers) of children with multiple disabilities were analyzed using a two-way between-subjects ANOVA—see SPSS results in Appendix N—with two levels of parents' gender (father and mother), and three levels of child's type of disability (intellectual disability + other type of disability, blindness + other type of disability, and deafness + other type of disability). The effects of the child's type of disability and the interaction between the parents' gender and the child's type of disability were not found to be statistically significant, while the effect of the parents' gender was found to be statistically significant. Each of the three components will be examined, in following paragraphs.

The p-value obtained from the procedure relating to the child's type of disability was not significant ($F(2,188) = 1.902$, $p = 0.152$). Thus, the decision was made to accept null hypothesis 6 regarding no difference attributed to the child's type of disability. It was therefore inferred that there would be no difference in the fathers' and mothers' total scores on financial needs based on the child's type of disability.

The p-value obtained from the procedure relating to the parents' gender was significant (F (1,188) = 6.45, p = 0.012; partial Eta squared = 0.033), indicating a small effect with 71% power. Therefore, the decision was made to reject null hypothesis 6 regarding no difference attributed to the child's type of disability. Consequently, it was inferred that there would be a difference in the total scores of the fathers and mothers on social needs based on the parents' gender (father and mother).

The p-value obtained from the procedure relating to the interaction between the parents' gender and the child's type of disability was not significant (F (2,188) = 0.387, p = 0.680). Hence, the decision was made to accept null hypothesis 6 regarding no difference attributed to the interaction between the parents' gender and the child's type of disability.

The descriptive statistics used by this analysis are presented in Table 37. This is followed by Table 38, which shows the results of the two-way ANOVA. Table 38 represents the three elements that are compared in the two-way ANOVA: the impact of the parents' gender, the impact of the child's gender, and the interaction of the two.

Table 37

Descriptive Statistics Table for Main Effects of Parents' Gender and Child's Type of Disability on Fathers' and Mothers' Social Needs Scores

Descriptive Statistics

Dependent Variable: Fathers' and Mothers' total Social needs scores

Child with Multiple Disabilities Type of Disabilities	Parents Gender	Mean	Std. Deviation	N
Intellectual + Other	Father	70.1970	10.01110	66
	Mother	75.0455	9.12213	66
	Total	72.6212	9.84578	132
Blindness + Other	Father	72.3125	9.72090	16
	Mother	78.0000	5.84237	16
	Total	75.1563	8.40165	32
Deafness + Other	Father	74.6000	9.27208	15
	Mother	76.5333	6.83339	15
	Total	75.5667	8.06304	30
Total	Father	71.2268	9.89266	97
	Mother	75.7629	8.35261	97
	Total	73.4948	9.41020	194

Table 38

Two-Way ANOVA Between-Subject Test Results for Parents' Gender and Child's Type of Disability on Fathers' and Mothers' Social Needs Scores

Tests of Between-Subjects Effects

Dependent Variable: Fathers' and Mothers' total Social needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	1380.421[a]	5	276.084	3.304	.007	.081	16.519	.891
Intercept	691286.423	1	691286.423	8272.517	.000	.978	8272.517	1.000
Child Type of disability	317.849	2	158.924	1.902	.152	.020	3.804	.392
Parents Gender	538.684	1	538.684	6.446	.012	.033	6.446	.714
Child Type of disability * Parents Gender	64.634	2	32.317	.387	.680	.004	.773	.112
Error	15710.074	188	83.564					
Total	1064980.000	194						
Corrected Total	17090.495	193						

a. R Squared = .081 (Adjusted R Squared = .056)

b. Computed using alpha = .05

Tables 37 and 38 show that the main effect of the child's type of disability is significant in this two-way ANOVA. Families (mothers and fathers) of children with multiple disabilities who have children with deafness + other type of disability had a mean education needs score of 68.47 with a standard error of 1.36, while families (mothers and fathers) of children with multiple disabilities who have children with deafness +other type of disability had a mean social needs score of 66.34 with a standard error of 1.31; families with children with an intellectual disability+ other type of disability had a mean social needs score of 63.38 with a standard error of 0.65.

Table 39 shows that the main effect of the parents' gender is significant in this two-way ANOVA. Mothers had a mean social needs score of 76.52 with a standard error of 1.158, while fathers had a mean social needs score of 72.37 with a standard error of 1.158.

Table 39

Two-Way ANOVA Between-Subject Test Results for Parents' Gender of Children with Multiple Disabilities on Fathers' and Mothers' Social Needs Scores

Estimated Marginal Means

Parents Gender

Dependent Variable: Fathers' and Mothers' total Social needs scores

Parents Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Father	72.370	1.158	70.086	74.653
Mother	76.526	1.158	74.243	78.810

Based on a comparison of the means, the data indicated that mothers with children with multiple disabilities had a higher mean social needs score when compared to fathers with children with multiple disabilities (76.526 ± 1.158 vs. 72.37 ± 1.158). This produced a significant mean score difference of 4.16.

Summary

This chapter provided quantitative data evaluating the educational, financial, and social perceived needs of the families (mothers and fathers) of children with multiple disabilities in Riyadh city, Saudi Arabia. The next chapter summarizes the findings, provides a discussion of results and conclusions related to literature, the limitations of research, potential implications for the social work, and recommendations for further research. In summary, the researcher conducted a series of data analyses. A summary of the hypotheses and results are presented in Table 40.

Table 40

Summary of the Dissertation Hypotheses and Results

	#	Results
Hypotheses of Research Question 4	1	Accept null hypothesis which means there were no difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the parents' gender (fathers and mothers)
	2	Accept null hypothesis which means there were no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents' gender (fathers and mothers)
	3	Reject null hypothesis which means there was a difference in the total scores of the fathers and mothers of children with multiple disabilities on social needs based on the parents' gender (fathers and mothers) in favor of the mothers, which means mothers had a higher mean score of social needs than fathers in the following items: • I need opportunities for social interaction between my child with multiple disabilities and my society (e.g., field trips and visits to public places, the National Day, and so on). (M= 4.8367) • My society's perceptions about children's disabilities need to be changed via specialized programs on radio and television. (M= 4.7857) • I need my society to accept our child/children with multiple disabilities no matter what his/her disability is. (M= 4.7347) • I need private agencies to involve my child with multiple disabilities in the activities they carry out (e.g., visits the sick in hospital and provide assistance to them) (M = 4.6429) • I need to have more opportunities to meet and to talk with other parents of children with multiple disabilities. (M= 4.2347) • I need help in explaining my child with multiple disabilities condition to other children (such as my children's friends). (M= 3.9898)

- My family needs help in learning how to support each other during difficult times. (M= 3.8878)
- My family needs help in discussing problems and reaching solutions. (M= 3.8163)
- I need more help in explaining my child with multiple disabilities condition to my partner/spouse. (M= 3.3469)
- I need more help in explaining my child with multiple disabilities condition to my partner/spouse's family members. (M= 3.3265)
- My partner/spouse needs help in accepting our child with multiple disabilities condition. (M= 3.0816)

4 Reject null hypothesis which means there was a difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the parents' level of education (did not attend school, elementary, middle school, high school, and post high school) in favor of mothers with high school diploma, which mean mothers with high school diploma expressed greater need for educational support/needs than mothers with other different level of education in the following items:

- I need more training in methods of emergency medical intervention with my child/children with multiple disabilities. (M= 4.5846)
- I need more information about how to deal with my child with multiple disabilities behavior in general. (M= 4.4000)
- I need more information to know how to deal with my child with multiple disabilities specific behavioral problems. (M= 4.4000)
- I need more information to understand my multiple-disability child's disabilities. (M= 4.2615)
- I need more information on how to help my normal child/children cope with their multiple disability sibling(s). (M= 4.1846)

- I need counseling to how to cope with my child/children with multiple disabilities (M= 4.1077)
- I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my child with multiple disabilities condition. (M= 3.7385).

4.1 Accept null hypothesis which means there was no difference in the total scores of the fathers of children with multiple disabilities on educational needs based on their various levels of education (did not attend school, elementary, middle school, high school, and post high school).

4.2 Reject null hypothesis which means there was a difference in the total scores of the mothers of children with multiple disabilities on educational needs based on their various levels of education (did not attend school, elementary, middle school, high school, and post high school). Mothers with a high school diploma expressed a greater need more educational support/needs than mothers with other levels of education.

5 Accept null hypothesis which means there was no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents' level of education (did not attend school, elementary, middle school, high school, and post high school).

6 Accept null hypothesis which means there was no difference in the total scores of the fathers and mothers of children with multiple disabilities on social needs based on the parents' level of education (did not attend school, elementary, middle school, high school, and post high school).

7 Accept null hypothesis which means there was no difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the parents' monthly income (from one SAR to less than 6,000 SAR, from 6,000 SAR to less than 10,000 SAR, and more than 10,000 SAR).

8	Accept null hypothesis which means there was no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents' monthly income (from one SAR to less than 6,000 SAR, from 6,000 SAR to less than 10,000 SAR, and more than 10,000 SAR).
9	Accept null hypothesis which means there was no difference in the total scores of the fathers and mothers of children with multiple disabilities on social needs based on the parents' monthly income (from one SAR to less than 6,000 SAR, from 6,000 SAR to less than 10,000 SAR, and more than 10,000 SAR).

Hypotheses of Research Question 5

1	Accept null hypothesis which means there was no difference in the total scores of the fathers and mothers of children with multiple disabilities on educational needs based on the parents' gender (father and mother) and the multiple-disability child's gender (male and female).
2	Reject null hypothesis number two regarding no difference attributed to the interaction between parents' and child's gender in favor of fathers with female children with multiple disabilities, which means the fathers expressed greater financial needs/supports when they had female vs. male children with multiple disabilities.
3	Reject null hypothesis number three in research question five regarding no difference attributed to the parents' gender. It was consequently inferred that there would be a difference in the total scores of the fathers and mothers on social needs based on parents' gender (father and mother) in favor of mothers, with the difference unrelated to the child with multiple disabilities gender (male and female), which means mothers had a higher mean of social needs score than did fathers.
4	Reject null hypothesis number four regarding no difference attributed to the child's type of disability. Consequently, it was inferred that there would be a difference in the total scores of the fathers and mothers on educational needs based on the child's type of disability (intellectual disability+ other type of disability, blindness +other type of disability,

	and deafness + other type of disability) in favor of children with deafness and other types of disabilities, with the difference unrelated to the gender of the parents of child with multiple disabilities (father and mother). Thus, families need more educational needs when they have children with deafness and other types of disabilities.
5	Accept null hypothesis which means there was no difference in the total scores of the fathers and mothers of children with multiple disabilities on financial needs based on the parents' gender (male and female) and the child's type of disability (intellectual disability + other type of disability, blindness + other type of disability, and deafness + other type of disability).
6	Reject null hypothesis 6 regarding no difference attributed to the child's type of disability (intellectual disability + other type of disability, blindness + other type of disability, and deafness + other type of disability). Consequently, it was inferred that there was a difference in the total scores of the fathers and mothers on social needs based on the parents' gender (father and mother) in favor of mothers, which means mothers had a higher mean of social needs than fathers.

Finally, overall, it is clear from the table that there were no differences between mothers and fathers of children with multiple disabilities in all need areas. The only differences were in hypotheses 3, 4, and 4.2 in research question 4. Moreover, in research question five, hypotheses 2, 3, 4, and 6 indicate differences.

CHAPTER V

DISCUSSION

The purpose of this exploratory study was to identify educational, financial, and social needs of parents of children with multiple disabilities who live in Saudi Arabia. This study also explored differences in need among families, based on parents' demographics (i.e., education backgrounds, and financial states) and child characteristics (i.e., child gender, type of child's disability). Also examined, is a summary of the results, contributions, and implications of existing literature. Lastly, strengths and limitations of the study are discussed, as well as recommendations for future research.

This study utilized a non-experimental design to survey mothers and fathers of children with multiple disabilities living in Saudi Arabia. The sample of 198 individuals (mothers and fathers) was recruited from three educational institutes: The Intellectual Education Institutes, Al Noor Institutes for the Blind, and Al Amal Institutes for the Deaf in Riyadh, Saudi Arabia for males and females. Participants completed a questionnaire with 44 items (Chapter III). The following section contains discussion of the study's results (Chapter IV) related to the study's five questions: 1) What are the perceived educational needs of the families (fathers and mothers) of children with multiple disabilities?; 2) What are the perceived financial needs of the families (fathers and mothers) of children with multiple disabilities?; 3) What are the perceived social needs of the families (fathers and mothers) of children with multiple disabilities?; 4) Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary, based on the parents' gender, education level,

and monthly income?; and 5) Do the perceived needs of the families (fathers and mothers) of children with multiple disabilities vary, based on the child's gender, or the child's type of disability?.

Summary of Findings

This study expands current understanding of needs of families who are parenting children with multiple disabilities in Saudi Arabia. The knowledge acquired from the study adds valuable information to the limited, but growing, empirical research about the needs of families with children who have multiple disabilities. Extensive demographic data were collected from all participants in order to provide as clear a picture as possible about the participants who took part in this study. Demographic information gathered included: the gender of the child with multiple disabilities, the child's grade, the child's educational setting, and the child's types of disabilities. Also considered were the child's age, the number of other children in the household, the parent's age, parent's level of education, parent's monthly income, amount of government financial aid received, the amount of charity financial aid received, and employment status (Appendix A).

Evaluating the findings, based on the study's questions, the data showed no difference among mothers and fathers in several variables.

First, by using one-way ANOVA based on parents' gender, the educational needs and the financial needs were not significant. Second, by using one-way ANOVA based on parents' level of education, the financial needs and social needs were not significant. Third, also by using one-way ANOVA based on parents' monthly income, all three needs—educational, financial, and social—were not significant. Forth, by using two-way ANOVA based on parents' gender and child's gender, the educational needs was not significant, and the financial needs was also not

significant. The exception to this finding was the interaction between the two IVs in which parents' gender and child's gender were significant. Moreover, the social needs finding was not significant except the first IV, in which the parents' gender was significant. Finally, by using two-way ANOVA based on the parents' gender and child's type of disability, the educational needs was not significant except the second IV, in which the child's type of disability was significant. The financial needs was not significant, moreover, the social needs findings were not significant, except for the first IV in which is parents' gender was significant.

There was a notable significant difference in responses relative to some variables:1) by using one-way ANOVA, the social needs based on the parents' gender in favor of mothers; 2) by using one-way ANOVA, the educational needs based on the parent's level of education was significant in favor of mothers with a high school diploma; 3) by using two-way ANOVA, the financial needs based on the interaction between parents' gender and child's gender was significant in favor of fathers with female children with multiple disabilities; and 4) by using two-way ANOVA, the educational needs based on child's type of disability was significant in favor of children with deafness and another types of disability.

The following outcomes address the demographic variables, followed by an examination of the findings. The researcher will address the five research questions in the second part of this section.

Interpretation of Demographic Data

All participants lived in Riyadh city, Saudi Arabia. The result of this study indicated that majority of the parents were in their 40s, and the fathers were older (M = 47.98) than the mothers (M = 41.67). Participants were mostly Saudis (85.7% of the mothers and 91.8% of the fathers).

The number of children in the family has an impact on the family care, the family's ability to provide care and access resources, and meeting financial responsibilities. This impact becomes greater in the case of families with one or more children with multiple disabilities. According to research findings, 57.1% of children with multiple disabilities are between 15-18 years old. Families in this study tended to have small numbers of other children (M = 3.45 including the child with multiple disabilities). In 2010, Al rubiyea stated that 57.2% of the parents of disabled children in Saudi Arabia had more than five children in one family including the child with disabilities. In contrast, this study showed that, out of 98 families, just twenty-one (11.2%) families had five children or more. Perhaps having a child with multiple disabilities affected family size, and the family's ability to maintain and support larger family sizes. Due to the Ministry of Economy & Planning (2017) the average size of Saudi family in 1996 was 7.5. Through time this number decreased to 5.7 in 2013 (Central Department of Statistics and Information, 2013).

Parents' level of education and employment status showed that over half (52%) of the mothers had high school diplomas or bachelor degrees (none of the mothers had graduate degrees), and over two thirds (70.4%) of the fathers had a high school diploma, bachelor, or master's degree. Parents' employment in Saudi Arabia plays an important role in the care of a child with multiple disabilities. Around two-thirds of the fathers had monthly incomes over 6,000 SAR and almost 52% of them were employed with the government. In contrast, 52% of the mothers were housewives and 17.3% were employed with the government. According to General Authority for Statistics in Saudi Arabia (2016b), in its labor force survey- third quarter, 63.4% of the Saudi females and 36.6% of the Saudi males were unemployed. From those who were employed, according to the Ministry of Civil Service in Saudi

Arabia (2016), out of 5,021,579 Saudi males and females who worked either with private or government, almost 1,178,033 worked in government jobs. These percentages may explain why 68.3% of the mothers were spending 70% of their time during the week in the care of their child with multiple disabilities compared with just 18.3% of the fathers. For the unemployed parents, 4.1% of the fathers and 82.6% of the mothers not working either with the government nor with a private company. The main reason for this high percentage of unemployment among the mothers is likely due to cultural factors, particularly society's attitude towards women working. The second reason is that the mothers are required by customs and tradition to take care of their children in general, and their children with multiple disabilities, specifically.

Over 90% of the study participants were married, while the rest were divorced or separated. The above percentages reflect the social culture of Saudi society. The Saudi culture encourages marriage at an early age, and society has a negative attitude towards divorce, for women in general and especially when initiated by the women. This has led families of divorced women to remarry them quickly. Because, from the point of the researcher, in Saudi culture, having a divorced woman is a negative stigma that is reflected on the woman's sisters as well as herself.

Analysis of the Results Related to the Research Questions

Five research questions guided this study, concerning; 1) perceived educational, financial, and social needs of the fathers and mothers of children with multiple disabilities; 2) differences in the perceived needs by parent’s gender, parent's level of education, and parent's monthly income; and 3) differences in the perceived needs by child’s gender and child's type of disabilities.

The first finding in this study indicates that the families (fathers and mothers) of children with multiple disabilities often have unmet needs. Outcomes showed that a

high percentage of the parents responded that they strongly agreed or agreed about need most of the educational, financial, and social needs areas (questions 1, 2, and 3). This result is consistent with Kyzar, Turnbull, Summers, and Gomez (2012) study. They stated that "families of children with severe and multiple disabilities may be at the highest risk for unmet need." (p. 31)

Need for information about future and current services available in society and the community, particularly from the Ministry of Education, Ministry of Labor and Social Development, and Ministry of Health were the highest educational needs areas for the parents in the study. It is unclear from the literature and from this study whether this information is not provided because these ministries are unaware that parents desire such information, are uncomfortable publishing specific information about their services, or simply do not have enough services for all families. While parents generally felt that the providers they encountered were highly knowledgeable about multiple disabilities, they also commented that they would like to receive professional guidance in seeking information beyond that offered by searching on the Internet or in their official websites. Previous studies of needs of families with disabled children—each of these studies conducted with one kind of disability—concluded that the main educational needs area was that of receiving specific information about future educational opportunities for their children with a mental disability (e.g., Alhazmi, 2009; Abdulaziz, 2012). A study conducted by Lindsay et al. (2014) concluded that the social workers faced many challenges working with immigrant families with disabled children; the most common challenge was that these families often lacked available information about resources and supports. Moreover, Lindsay et al. (2012) concluded that “there is a need to provide general information to families about resources and services available to them.” (p. 2016)

A second key finding highlighted many areas in financial needs among families of children with multiple disabilities in Saudi Arabia. The first financial need indicated was the need of additional financial support from the state to provide better care for families' child/children with multiple disabilities. The researcher attributes this finding to the fact that caring for a child with multiple disabilities drains significant resources and consumes most of the family's income. This drain of resources negatively affects the rest of the family members especially when this family has large number of children and these children are school aged. This result is consistent with Alhazmi's (2009) study.

The second financial need was the need of additional financial help in accessing special equipment for families' child/children with multiple disabilities. AlAzemi (2010) suggested that the Saudi's governmental authority needed to provide an effective financial program and support services for families to improve their quality of life, and specifically the quality of life of their children with disabilities. According to Fuchs et al., 2005 and Fuchs, Burnside, Marchenski, and Mudry, 2010, the purchase of additional services and assistive devices such as respite care, individual therapy, technical health aids, feeding devices, wheelchairs, symbol boards, and hearing aids are most often to assist children with multiple disabilities.

The third financial need was the need for additional financial support to secure comfortable, safe, and appropriate transportation options for families' child/children with multiple disabilities. The researcher attributed this result to the lack of financial resources available to provide for a private driver and the lack of equipped vehicles to transport families of children with multiple disabilities. In fact, in Saudi Arabia there is no public transportation. Therefore, it is common for Saudi's families to hire a private driver, because institutes lack of sufficient quantities of school buses to serve

children with disabilities. This result is consistent with Abdulaziz's (2012) study which pointed out that the second financial need for the families of children with a mental disability is receiving financial support for appropriate transportation for their child/children, as well as Alhazmi's (2009) study of children with a mental disability, and Al rubiyea's (2010) study with children with mental and physical disabilities.

The forth financial need identified was the need for additional financial support to pay for the services of a domestic worker to help take care of families' child/children with multiple disabilities. In Saudi Arabia, the mother is, according to findings, the essential parental figure. She holds primary responsibility for instructing, taking care of, and raising the children while the father's primary responsibility is supporting the family's budgetary needs. Since the mother is the essential parental figure, she is intensely mindful of her child’s instructive, behavioral, and physical challenges. This familiarity with the child's necessities may result in the mother exhausting herself in the attempt to meet all needs for the disabled child, while also parenting her other children. Consequently, must of the mothers in this study (85.7%) looking for help from the others but could not afford to pay for the helpers. Thus, they expressed a need for financial support to pay for a domestic worker. This finding supports results of previous studies. For example, a study conducted by Merza and Al-Salamouni (2012) concerning mothers of children with multiple disabilities, stated that 53% of the families of children with multiple disabilities needed a female domestic worker to help them care of their child with multiple disabilities.

Lastly, the fifth financial need identified was the need of additional financial support to meet treatment and medical care needs of families with children with multiple disabilities. Although parents addressed many financial needs, including the previous four financial needs, findings from this study, and those conducted by other

researchers (e.g., Lindsay et al., 2012; Fuchs et al., 2005; and Alhazmi, 2009) reported that need of additional financial support to provide for treatment and medical care for their child/children with multiple disabilities was rated last among the five identified financial needs.

Overall, the findings of the current research support previous studies suggesting that the financial need is one of the most significant needs that families of children with multiple disabilities in Saudi Arabia reported as essential to their ability to care for their child/children with multiple disabilities. In general, the researcher attributes the results of this finding to the high cost of caring for a child with multiple disabilities. Because this child needs continuous health follow-up due to the increased spread of chronic diseases, such as epileptic seizures and muscle stiffness among children with disabilities, the child with multiple disabilities needs physical training and rehabilitation services, occupational therapy, and physiotherapy, among other therapies. Providing this level of care drains a large part of the families' monthly income, especially if the families' income, aid from the Saudi's government, or charity contributions are insufficient to meet their financial needs. In this study, 48% of the mothers and 51% of the fathers stated that the governmental financial support was not enough to meet all the needs of their child with multiple disabilities; 57.1% of the mothers and 55.1% of the fathers responded that the charity financial support was not sufficient to cover the needs.

A third key finding highlighted many areas of unmet social needs among families of children with multiple disabilities in Saudi Arabia. The first one was a report that the Saudi society’s perceptions about children's disabilities needed to be changed via specialized programs on radio and television. This result was consistent with Abdulaziz's (2012) study with families of children with mental disability, as well

as Alhazmi's (2009) work with the same population. The researcher attributes the result, in general, to the lack of positive media programs in the field of awareness of the community toward the needs of individuals with disabilities. Thus, this lack of positive programs may lead to spread of negative attitudes among Saudi society members towards children with multiple disabilities and their families—this argument may open a window for a future research. Moreover, despite the existence of specialized programs in politics, economy, sports, and non-disabled children, there are no programs dedicated to children with multiple disabilities and their families.

The second social need identified was the need for opportunities for increased social interaction between the families' child with multiple disabilities and the families' society (e.g., field trips and visits to public places, the National Day, and so on). The researcher attributed this finding to many reasons. First, the lack of centers and clinics that specialized in family therapy specifically in the neighborhoods where most of the families participating in this study live. Second, the lack of activating the role of the family in public schools, centers, and associations in the neighborhoods. Finally, the absence of scheduled meetings between the families of children with multiple disabilities to talk about the problems facing them, discuss their difficulties in caring for their children, and exchange experiences with other parents. This result was consistent with Alhazmi's (2009) study with families of children with mental disability, and with Yunis's (2015) study on the needs of parents of children with autism in Saudi Arabia. Moreover, Fuchs et al. (2005) reported that funding structures and a lack of intersectoral collaboration created many barriers for families who have children with disabilities. In Lindsay et al. (2012), the healthcare and community service providers mentioned that developing trust with families raising a child with a disability was difficult.

The third social need identified was the need for government agencies to involve the families' child with multiple disabilities in the activities that are government sponsored (e.g., special exhibits, attending sport events.) This result was consistent with Abdulaziz's (2012) study. The researcher attributes the result to the findings that there were few available programs in the community that offered opportunities for the children with multiple disabilities to participate and engage in activities and events with their peers, disabled or not disabled, in various educational and entertainment activities. This finding also supports those of a few previous studies. For example, a study conducted by McConkey et al. (2004) stated that the families of children with multiple disabilities in Ireland presented combinations of complex needs including ill-equipped and inadequately resourced facilities to meet mainstream children's services or, in particular, community disability programs. The lack of programming and inclusion affect the involving children with multiple disabilities in society activities. The researcher attributes the result to the few programs available in the Saudi's community that offer opportunities for integration and social interaction of the children with multiple disabilities with their peers. Further, parents report that they sense that their children have a marked weakness in social skills. Thus, parents are looking for programs to increase the social competence of their children.

The fourth social need identified was the need from the families' society to accept the child/children with multiple disabilities no matter what his/her disability. This result was consistent with Lindsay et al. (2012), they stated that "Healthcare providers mentioned that differences in how disability is viewed sometimes influenced whether their clients followed treatments and recommendations." (p. 2011)

Finally, in the social needs dimension, the researcher found one of the needs areas with surprising results; 48% of the mothers strongly agreed with the statement that "my partner supports me in caring for my child/children with multiple disabilities." The researcher attributes this result to the improvement of the Saudi men's attitudes toward his responsibility to care of his child with multiple disabilities. This finding contradicts what is known, or assumed, about an Arab man. Although it is true that the man in an Arab family is responsible for providing a living, while the women in the same family are responsible for raising and caring the children, the women's response to this question may related to the changes that have happened on the Saudi family's structure from extended family to nuclear family. This finding was also supported by Merza and Al-Salamouni (2012) where 45% of the mothers of children with multiple disabilities in Saudi Arabia responded that their husbands supported them in caring for their child/children with multiple disabilities.

In general, the researcher attributes the results of this dimension to the prevalence of negative attitudes and misconceptions in any society including Saudi's society about disability and disabled children. This argument has been supported by many studies (e.g., Alquraini, 2012; Alquraini, 2011; Abdulaziz, 2012) including the findings of study. Moreover, the social associations in the community for families of children with disabilities can create a cycle of being left out or marginalized. For example, the lack of social associations in the community that deal with the families of children with multiple disabilities may be because the disabled children's family presents many problems. These challenges may lead to the aggravation of psychological pressures (e.g., anxiety, fear, or self-blame) in terms of internal relations (e.g., between the disabled child and his/her siblings or between parents and

each other) or in terms of external relations (e.g., relationship with friends, relatives, neighbors, or the community as a whole).

Following the analysis of data from mothers and fathers of children with multiple disabilities, we found that mothers expressed more needs in the educational and social needs dimensions than did fathers of the same child except for in regards to financial needs. Mothers tended to stay home to care for a child more than fathers in Saudi Arabia, so fathers might have greater financial needs.

A fourth key finding highlighted in the research was a statistically significant difference in the total scores of the fathers and mothers of children with multiple disabilities on the report of social needs based on the parents' gender (fathers and mothers). Mothers had a higher mean social needs score than fathers.

A fifth key finding in the area of social needs highlighted a difference in the total scores of the fathers and mothers of children with multiple disabilities regarding their educational needs. This difference was based on the parents' level of education (did not attend school, elementary, middle school, high school, and post high school) in favor of mothers with a high school diploma. This result was not consistent with Alhazmi's (2009) study with families of children with mental disability. The results of one-way ANOVA in Alhazmi's study was not statistically significant on the factor of educational needs for the fathers.

A sixth key finding highlighted in this study produced an interesting result in terms of gender. There were statistically significant differences on financial needs variable based on the interaction between parents' gender and their child's gender in favor of fathers with female children with multiple disabilities. The researcher attributed this result to the fact from this study that almost three out of four fathers were in the lowest two categories in terms of monthly income (less than ten thousand

riyals per month). In other words, this means that these fathers earned a small amount of monthly income compared with the latest statistic, about the average monthly income for families in Saudi Arabi—Saudi and non-Saudi—and for the Saudi's families. According to the Central Department of Statistics and Information (2013) in Saudi Arabia, the average family monthly income was 10,723 SAR including those who are not Saudi, and the average of Saudi's family monthly income was 13,610 SAR. Therefore, the researcher assumes that their inability to distribute this small amount of income will not be enough to meet the needs of their families in general, and the complex needs of their daughters with multiple disabilities in particular, especially if the girls are 12 years old, or older without any older sisters who can help. Thus, in this situation, most of the families were forced to hire a female domestic worker, which required an additional investment from their limited monthly income.

The last key finding highlighted statistically significant differences on the educational needs variable based on child's type of disability (intellectual disability and other type of disability, blindness and other type of disability, and deafness and other type of disability) in favor of children with deafness and other types of disabilities. The researcher attributed this result to the lack of awareness and educational programs available to parents of children with multiple disabilities in this category, compared to the families of children with multiple disabilities in other categories. This lack is possible because the number of children in this category is small according to the results of this study (n = 15) which means 15 mothers and 15 fathers. There is also just one educational institute for this category of disability in Riyadh— in 2010, the population of Riyadh was 6,505,509 (Abdul Salam, 2013)—compared to two institutes for each of the other categories. In addition, the researcher did not find any research in Saudi Arabia concerned with the needs of the family,

training programs, or the needs of children in this category compared with other categories (e.g., Alhazmi, 2009; Abdulaziz, 2012; Yunis, 2015). This result was consistent with Merza's and Al-Salamouni's (2012) study about mothers' training needs. They pointed out that 79% of the mothers of children with severe and multiple disabilities in Saudi Arabia had not attended any training program related to their child's situation.

Contribution of the study

With a lack of previous research related to the needs of families with disabled children, findings from this study makes a unique contribution to the knowledge regarding needs of families of children with multiple disabilities. The findings of this study may provide useful information to social workers and policy makers, especially in Saudi Arabia where the study was conducted.

First, this population study provides census-descriptive information about the educational, financial, and social needs of a family of a child with multiple disabilities. These findings could be used as a fundamental reference for social workers and policy makers who are interested in expanding on, or seeking more specific data, on needs of these families. Moreover, the results of this study provide a window into the needs of the families who take care of child with multiple disabilities. The following discussion focuses on interpreting these findings in a manner that may help social workers, and policy makers, integrate this information into practice and policy.

Implications of the Study for Social Work

Implications drawn from both the literature review and from the research findings are applicable to social workers, Ministry of Education staffers, policy makers, and researchers regarding the needs of the families of children with multiple

disabilities in Saudi Arabia. Moreover, the findings of this study raise awareness to the families' needs, and recommend services specifically tailored to meet their needs within the Saudi society.

Implications for Social Work Education and Training

Social workers assist people to live a more satisfying life by helping them find solutions for their problems within society. As a result, social workers are tasked with building relationships, engaging with clients, and working closely with the community to provide supports and needed services. This commitment to citizen welfare implies that social workers' training should alert them to the depth of their responsibility, and the role they play in society. Only through increased awareness, can social workers become more professional and provide practical and comprehensive solutions to issues that affect the society (Como & Batdulan, 2012). This awareness thereby enables them to act in a dignified manner that boosts the confidence of the society in the process of individual and group interactions. Through knowing their client's needs and requirements, social workers can play a key role in improving the quality of services provided to parents of children with multiple disabilities, their disabled and non-disabled children, and to all family members. To understand the advantages of this important role, social workers must work under the following assumptions: first, social workers should be aware that they have a great responsibility to work with and support the family of the disabled child because the needs of disabled children are always linked to the needs of their families, and vice versa. Second, social workers should consider that the relationship of partnership with the families of children with multiple disabilities is the best way to develop their personalities relative to customs and traditions, their professional skills, and their knowledge of resources to support their clients. Lastly, social workers should seek to

make the families less dependent on their services by providing all possible resources and links to support so the families can themselves grow and assist their children in fulfilling their own needs and requirements.

The government represented by the three ministries, experts, and researchers at universities who study these families and their needs may need to offer trainings to social workers to provide sufficient knowledge on new implementations of policies, practices, and interventions. Moreover, it is imperative to understand the necessity of providing resources to the clients (children and families) involved in the child welfare system. The findings of this study can raise awareness among social workers to increase their competence to address the clients' (children) needs and tailor the services to meet the needs of the family. As the parents noted on open-ended questions, current trainings offered for parents of children with multiple disabilities are not enough. It was reported that 77 (78.6%) of the mothers and 78 (79.6%) of the fathers hadn't attended any training program about parenting disabled children. According to Merza and Al-Salamouni (2012), in their study about training needs of mothers of children with severe and multiple disabilities in Saudi Arabia, 79% of the mothers hadn't attended any training program related to their child's situation. The findings of this study, and Merza's and Al-Salamouni's study, may be related for two reasons. First, either there is a reluctance to attend the training programs by the parents, or there are no adequate training programs for the families of children with multiple disabilities. The surprise is that these results are repeated and there has been no change or benefit from the past researcher's recommendations. Therefore, the researcher for this study suggests that offering guidance to social workers and policy makers to assess the training needs of the families of children with multiple disabilities be a prerequisite for holding those programs and training activities.

Implications for Social Work Practice

The results of this research study have important implications for social work research connected to the practice of social work with families and social work with the disabled. This study adds to the literature of social work on various facets. First, because there is no program in Saudi Arabia designed to assess the needs of families parenting children with multiple disabilities, these results add support to social workers who work with families of children with multiple disabilities, or to policy-makers who would like to know the needs of these families. Also, since local agencies must depend on feedback and communication from families of children with multiple disabilities in order to understand the need for obtaining, or even requesting, services, additional research, focused on the particular needs of these families is valuable. Finally, without direct feedback from families, provided in this study, the social workers are limited in their capacity to respond to the unique needs of the population.

According to Al Mousa et al (2006), an insufficient amount of information exists on the field of special education in regards to understanding the needs of families parenting children with disabilities in Saudi Arabia. Prior to this study, no information addressed the challenges facing parents taking care of children with multiple disabilities and identifying ways in which they could be supported. To ensure that these challenges are addressed there is a need for sound research on the needs of the families of children with multiple disabilities, and their interactions with social work. Moreover, universities should educate students of social work about the implications of having children with multiple disabilities in a family, and the importance of their collaboration as a key professional to help fulfill the families' needs. This can be accomplished by adding coursework that presents social workers with models of collaboration that can be practiced in public, private and educational

settings.

Social workers are continually interacting with the members of the society every day as they help solve various community problems. Through interactions, they understand more about the community systems and structures (Como & Batudulan, 2012). Due to their understanding of social structure and system of a society, social workers have access to rich information and real case situations in families that can be applied to clients. Furthermore, the information gathered by this research study, which identified the primary needs of families parenting children with multiple disabilities, can be used by planners in various core ministries such as Ministry of Health, the Ministry of Education, and the Ministry of Labor and Social Development. Such information will assist administrators in prioritizing services for families of children with multiple disabilities. In addition to the assistance that social workers provide to the ministries, social workers should develop a synergy that ensures collaboration and coordination of the services through the three ministries. This will ensure that there is neither a duplication nor a gap in resources and efforts, and will ensure that established programs are effective and comprehensive in addressing the needs of the families and their children with multiple disabilities. For instance, the Ministry of Education should collaborate with the Ministry of Health to consider beginning assessment procedures early. An interdisciplinary team should conduct this assessment. The Social Work Departments at these three ministries must collaborate with other professional agencies (e.g., universities) to either adapt or create assessment scales (e.g., academic scales, IQ tests, and adaptive behavior scales) and make them appropriate for the Saudi culture. Consequently, this may help the families of children with multiple disabilities to address their needs early and then seek to fulfill these needs through identified programs.

Strengths and Limitations of the Study

Strengths

Unlike previous studies, the present study addressed several key issues that had not been focused on in the literature. First, although a few studies (Al rubiyea, 2010; Hefny 2001) explored families of children with multiple disabilities and social work, the work was limited and formed an understudied aspect of family's needs. Second, this study took into account the individual and combined influences of the following variables: parents' gender, child's gender, child's type of disabilities, parents' level of education, and parents' monthly income. These variables have been shown to be individually related to outcomes for families' educational, financial, and social needs. One strength of this study is that new information is presented because no previous study considered these variables together. Finally, the present study directly explored how the previous variables influenced family needs and suggested, from the results of question one, what outcomes might be helpful in developing training programs for families of children with multiple disabilities from the Ministry of Health, Ministry of Education, and Ministry of Labor and Social Development. By working together and sharing information, the three ministries could enhance a family’s capacity to deal constructively with their child's disabilities in specific terms and deal with the society in general regarding integration, education and social development.

Limitations

Despite the strength of the study overall and the positive results obtained, there are several limitations which must also be acknowledged.

1. The first limitation stemmed from conducting the research within only one city in Saudi Arabia, thus failing to have a broad representative sample of the

target population in the kingdom. Generalizing the results to other populations, or to the general population, cannot be accomplished due to this limitation. The results were thus specific only to the study population. This was due to lack of timeframe of this research project. Also, the sampling design was based on convenience, and did not include random sampling methods that would allow for generalizations beyond the study sample. However, the possibility exists for future participation, in another round of this study, by parents of children with multiple disabilities in the other cities in Saudi Arabia. For future research, sample selection reliability could be strengthened with a broader population mix by including families of children with multiple disabilities representing all three institutes within the kingdom.

2. In regards to demographic variables, when asking participants to state their marital status, the responses of married, separated, or divorced appeared to be confusing with what individuals considered separated or divorced. For example, one individual indicated being separated, and the other individual reported being divorced. Some participants may have perceived the need to clarify their answers, but due to the nature of the questionnaire, there was no capability to probe for responses or qualify the participants' answers to a certain item. For future research, clarifying each participants' marital status is important to avoid confusion.
3. Data collected from parents using a survey method is subject to many types of bias. One type is the social desirability bias, which takes place when parents tend to respond favorably to the survey, especially in face-to-face interviews, to complete the questionnaire. Additionally, parents may skip questions or give arbitrary answers when questions are ambiguous, if they do not have

enough information about the situation (e.g., how their partner helps their child), or if questions feel too private, such as those regarding personal income. The study attempted to minimize the effect of these sources of bias in several ways. First, the presence of the researcher or the data collection team when the questionnaires were being completed helped clarify or explain any ambiguous questions to the participant, which could further improve the response accuracy. Secondly, the anonymity of the survey subjects was emphasized (participants were not being asked to provide names, national IDs or other identifiers), and confidentiality was assured to encourage parents to respond freely without worrying about negative repercussions.

4. The researcher worked with an expert in Arab language—professors from King Saud University and University of Louisville—to translate the instrument from English into Arabic and be able to communicate with the participants. The researcher also adjusted the instrument to fit the needs of the Saudi public in the Saudi context. Therefore, this study is limited by the meaning that may be lost in translation.
5. Participation was voluntary, and the school social workers and the researcher, and his data collection team approached participants and asked if the participants were willing to participate. Refusal to participate was not recorded; therefore, it is not known how many families (that were approached) refused to participate, and consequently, their reason(s) are not known. All participants who were approached expressed a willingness to participate. All who met the study criteria were utilized in this study. These families appear to be representative of the children with multiple disabilities families who are enrolled in the three institutions. Because the relationship between need and

support and willingness to participate is not known, it could be concluded that those who chose to participate were just as likely to be needy/not needy or supported/not supported as those who chose not to participate.

6. A limitation of this study was the inability to control threats to internal Validity. One particular area of concern is the possible social pressure that may compel skewed responses from parents. The natural bonding relationship between school social workers at some institutes and the child's parents may have encouraged participants feeling inadvertently compelled to respond in a certain manner. The existing relationship between social workers and parents may have played a part in parental responses to complete the questionnaire.

Recommendations for Further Research

Recommendations to Major Federal Legislations in Saudi Arabia.

There have been federal legislations in Saudi Arabia concerning children characterized as having disabilities. However, existing federal legislation does not go far enough to address the needs of families of children with multiple disabilities. Regardless of the advances made thus far, legislation can always be reformed and altered to more adequately address the needs of these children with disabilities (Parasuram, 2006) and their families. It is essential, not only in Saudi Arabia, but in all countries, to make sure that children are well provided for, regardless of their level of ability. Since the establishment of the Supreme Council for the Affairs of Persons with Disabilities, in 2000, Saudi Arabia has been working to address the needs of families caring for children with multiple disabilities. However, this does not mean that services are at the level to best achieve all that could be attained to meet the complex of educational, financial, and social needs of the families of children with multiple disabilities. For example, children with multiple disabilities are still educated

in institutions for children with single disability (Meekosha & Soldatic, 2011). Although integrating these children has become more common since the Ministry of Education established the first Institute for Blind and Visually Impaired People in 1960 in Riyadh, Saudi Arabia still places children with multiple disabilities in special institutes focused on a single disability (Alquraini, 2012; Alotaibi, 2006). Based on feedback from parents participating in this study, federal legislation should be altered to address the needs of the families of children with multiple disabilities and their children more adequately. Recommendations include:

First, devise a specific and quantifiable definition of what constitutes a child with multiple disabilities. Often this is a point of dispute among lawmakers and providers, as laws intended to impact children with disabilities contain varied, and often confusing, definitions about what is considered a disability, and further, what constitutes multiple disabilities. The fact that this term has not been successfully defined results in a significant gap in the implementation of current law. In order to provide for the mental, physical, and emotional needs of children, and provide resources for their families to accomplish this, there should first be proper identification markers by which children are considered disabled. Moreover, legislation should be altered to reflect this definition, once identified, so that the term "children with disabilities" will have a single clear meaning (Brault, 2012). In Saudi Arabia the term *multiple disabilities* has different definitions based on who is using the term. For instance, Ministers' Council Proceedings U.S.C. (2000) in Hemdi, 2010 defined multiple disabilities as, "having one or more of the following: visual disability, hearing disability, mental disability, physical or movement disability, learning disabilities, speech and talking difficulties, uncontrolled behavior, autism, and any other disabilities which require special care." (p 6) A royal decree dated

12/19/2000 for care of persons with disabilities, recognizes a person with disability as, any individual who has total or partial failure in mental, sensory, educational, and psychological abilities that limit the capability of meeting normal requirements of a class of a person who is not disabled (Alquraini, 2011).

As defined by the Ministry of Health in Saudi Arabia (2018) for purposes of deciding how and where to educate disabled children, children with multiple disabilities are those who have, either cerebral palsy or mental retardation, in addition to at least one other disability, such as visual or auditory deficits, movement disabilities, behavioral disorders, etc. Moreover, Article 51 of the Labor and Workman law of Saudi Arabia, defines people with disabilities as individuals whose capability to perform a job has diminished, due to physical or mental infirmity (Alquraini, 2011). From the previous definitions, it is clear how legislation, based on different definitions and terms, can create laws that are difficult to understand and implement. For example, the disabilities identified by the royal decree include psychological abilities, while this type of disability is not included in the Ministers' Council Proceedings U.S.C. and Labor and Workman law definitions.

Second, locate the articles about the rights of children with disabilities within the first pages of a piece of legislation in order to bring more attention to the need. Frequently, the public considers the articles at the front of any legislation to be more serious than all other articles in the legislation, especially when dealing with a lengthy statute. To ensure that a statute has a serious impact, it should have the weighty articles at the beginning so that they receive priority status (Brault, 2012). Therefore, the researcher recommends that legislation in Saudi Arabia should place these weighty articles at the front pages so that one puts the utmost concentration that is needed to make these legislations pass by the king through the Council of ministers.

Of course, if the legislation does not include important details such as proper funding; the law will be supported but will not achieve the desired effect. In other words, several new pieces of legislation will be required to shift attention and resources. One, which defines, one which funds, and all in the front matter of a piece of legislation.

Third, the government in Saudi Arabia needs to create a national agency to gather and publish data on demographic, medical, and social issues facing the disability population. According to Al-Jadid (2013), in most developing countries, persons with disabilities have no equal access in the society to services such as health care, education, and employment opportunities. Moreover, most developing countries—including Saudi Arabia—reported that disability prevalence rates were below those reported in many developed countries, because they collect data on a narrow set of impairments, which yield lower disability prevalence estimates (World Health Organization, 2011). In Saudi Arabia, which is still considered a developing country, limited research has been conducted on the prevalence and incidence of disability (Al-Jadid, 2013), because there is no standard outcome measure used to assess or identify the degree of disability. Further, poor data collection procedures were a major problem in existing Saudi disability-related research (Al-Jadid, 2013). In addition, in Saudi Arabia, there is no fundamental, or private specialized institute for dealing with or collecting such data. For example, as reported in chapter four of this dissertation, there are no clear figures on the incidence and prevalence of children with multiple disabilities in Saudi Arabia. Therefore, the figures cited do not justify the claim that Saudi incidence of disability is higher than in the west. As noted in Al-Gain and Al-Abdulwahab (2002), it is difficult to find reliable statistics on this subject; in particular, according to Alquraini, 2010 and Al-Jadid, 2013, the government figures significantly underreport, but it is nearly impossible to establish

by what degree. Saudi Arabia lacks relevant and accurate data regarding the population's means of dealing with any type of disabilities. The available data was often underestimated or poorly reported thus making the government planning process challenging.

Forth, the Saudi government should consider allowing both male and female children with multiple disabilities below the age of nine to attend female institutes. In Saudi Arabia, the educational system for children with multiple disabilities is separated by gender. However, for the past five years, the public-school system has permitted boys and girls to attend girls' schools together until third grade. The success of this change has not been fully evaluated, but if it turns out to be successful, the same choice should be extended to children with multiple disabilities. The results showed a lack of schools specializing in all stages of education. The researcher recommends, therefore, that the competent authorities should work on providing specialized schools that serve children with multiple disabilities.

Last, Saudi Arabia should create a legislation aimed at identifying the major factors leading to a high incidence of disabilities, and at diminishing their effects. The impact of socioeconomic factors on the prevalence of disabilities has been illustrated in many studies (e.g. Blackburn, Spencer, & Read, 2010; Emerson, Hatton, Llewellyn, Blacker, & Graham, 2006). Poverty is strongly associated with the increasing number of children with disabilities primarily because this population has a higher risk of exposure to environmental toxins (e.g., pollution, lead), diseases, crime, and a lack of healthy food (Krieger, 2007; Halfon, Houtrow, Larson, & Newacheck, 2012). Lack of healthy food can contribute to diabetes and childhood obesity, which are two other significant factors that account for the increasing rate of children with disabilities (Williamson & Carr, 2009). Many of these same risk factors (e.g.,

malnutrition, head injuries, lead poisoning, low birth weight, malignancies, poverty, and child abuse/neglect) are linked with intellectual disabilities (Fujiura & Yamaki, 2000). The perceptions of health and disease and changes in disability definitions have contributed to an increased reporting of disabilities that will appear to show an actual increased incidence (Halfon & Newacheck, 2010).

It is also important to note that there are at least two factors where cultural patterns that contribute to the incidence of disability are unlikely to be addressed by legislation. One is the high number of automobile accidents in Saudi Arabia. Whether this results more from cultural attitudes about driving (Bendak, 2011)—one example of these behaviors from Bendak's study is red light crossing, 28,497 accidents happened due to red-light crossing in 2008—or from government attitudes about road maintenance and accident prevention is uncertain. It is clear, however, that accident rates are higher in Saudi Arabia than in most western countries. According to Bendak (2011), "Saudi Arabia has one of the highest fatality risk levels in the world in terms of traffic accident fatalities with around 29 deaths per 100,000 people … more than 36,400 get injured due to the approximately 486,000 accidents that happen annually." (p 67). While there are many traffic laws already on the books in Saudi Arabia, they are almost never enforced, and so the culture continues to ignore them.

The second factor contributing to a high disability population in Saudi Arabia is even less likely to get the attention of the government—the high proportion of consanguineous marriages, which leads to a high incidence of genetic disorders caused by the resulting expression of recessive genes. Because this tradition has religious ties, it is unlikely the government will acknowledge it, much less address it.

The relationship between the law and the culture is a complicated one. If law simply reflects the preferences and practices of a certain culture, it leaves the society

virtually unchanged. If, on the other hand, the law strays too far from culture beliefs, the society will simply ignore it—for example, the refusal to accept traffic laws in Saudi Arabia. Therefore, while laws should always be based on sound principles, these laws can only effect incremental change in any given society if the society abides by them.

Recommendations for social work practice

The following recommendations are offered for implementation in Saudi Arabia with the aim of improving the scope of social work and developing a successful local model of professional social work practice in the Kingdom.

First, more financial support needs to be allocated to social work services, especially those offered by practitioners in the Ministry of Labor and Social Development to help clients who are in immediate need. This ministry's programs and funding should be reevaluated every five years with new allocations based on changing client needs.

Second, relationships need to be built and sustained among social work education programs, the government social services departments and charity agencies. The resulting channels would help the education program administrators to become familiar with the Saudi societal issues for which social workers are being prepared.

Third, the linkage and communication among different social work service units needs to be improved to help practitioners provide more effective and efficient services to their clients (children with multiple disabilities and their families).

Lastly, the responsibility for *zakat* affairs and its distribution should be redirected from the Ministry of Finance to The Ministry of Labor and Social Development. Because the distribution of alms to the needy falls is dependent on awareness about the eight categories of people who should receive *zakat*, and because

its social programs deal with these individuals, it makes sense that this ministry, rather than the Ministry of Finance, distribute *zakat*. Therefore, social work practitioners employed at agencies within the Ministry of Labor and Social Development should participate in distributing *zakat* (Alsaif, 1991).

Future Research

General recommendations:

- Future research should explore a qualitative approach on the perspectives of families who have experiences raising children with multiple disabilities. Obtaining families' perspectives on their needs can provide in-depth personal insight, especially in practice field. According to Alhammadi (2000), Saudi professionals and specialists in psychology, rehabilitation, social work, and sociology have undertaken great efforts to improve the status of disabled Saudi persons and to integrate them within the larger society. However, even though quantitative studies can potentially reach a wider participation group, the qualitative studies can reach deep data from the families as they explain their experiences about their needs and their child's needs.
- Since this study is the first of its kind in the kingdom of Saudi Arabia, it provides a window into the needs of parents of children with multiple disabilities. Given the small sample, however, there remains a severe lack of research in the area of needs of families of children with multiple disabilities in Saudi Arabia. Other research studies could involve social workers, gathering data based on family characteristics such as family's size, the impact of the lack of positive programs on Saudi media about families of children with multiple disabilities, how

Saudi society members deal with children with multiple disabilities and their families, cultural situation, and other variables.

- Another social validity study that may add to the literature of identifying families with children with multiple disabilities in Saudi Arabia concerns the relationship between the governmental services and charitable services. For example, how do these two distinct funding sources prioritize services? What happens when services overlap? Are there limitations to services based on family income, education or social standing?
- The life cycle within the disabled child's family changes with the development of the disabled child's life. The needs and resources of the family are constantly changing in order to meet their child's evolving needs. Therefore, the services provided to these families must be updated regularly; continuity and flexibility help families adapt through the changing periods in their lives. Therefore, the services must be compatible with the needs of the family, rather than expecting families to fit into existing services throughout the period of care.
- A series of studies that aims to discover similarities and differences between the needs of Saudi and American families also should be conducted. This type of study would help educators, policy makers, and service providers understand the needs of families of children with multiple disabilities around the world, and compare these findings to the needs have been met or not for Saudi families. In turn, these studies would assist in deciding if other similar U.S. needs assessment tools,

used to identify the needs of American families could be implemented in Saudi Arabia.

- A series of studies focused on awareness issues of social integration of families of children with multiple disabilities within the Saudi community. For example, how could parents of children with multiple disabilities develop their professional and social skills and their child's skills?
- The findings of this study indicate several directions for future practice as well as future research that will enhance the growth of services for families of children with multiple disabilities in Saudi Arabia such as: future changes in the family-training programs in Saudi Arabia, developing parent-social worker relationships, and improving pre-service training programs and university-school partnerships. Social work departments and other institutions in Saudi Arabia responsible for families' preparation may give specific attention to workshops that prepare families to parent children with multiple disabilities.

Conclusion

This chapter has analyzed the quantitative data collected from the parents of children with multiple disabilities in Saudi Arabia. This study may be considered the first of its kind in the Kingdom of Saudi Arabia. This study utilized a non-experimental design to survey mothers and fathers of children with multiple disabilities in Saudi Arabia. The sample of 198 individuals (mothers and fathers) was recruited from Intellectual Education Institutes, Al Noor Institutes for the Blind, and Al Amal Institutes for the Deaf in Riyadh, Saudi Arabia. Participants completed a 44-item questionnaire.

Data were analyzed with the Statistical Package for the Social Sciences (IBM SPSS-22). The researcher coded the survey and entered the data. Descriptive statistics (e.g., frequencies, means, standard deviations, ranges, and percentages) were used to analyze the questionnaire data. In addition, inferential statistics, such as one-way ANOVA and two-way ANOVA were used for answering the research questions. Probability level for tests of significance results was $p < .05$.

The analysis indicated that families' needs are still falling short of being met in Saudi Arabia. It was clear from one-way ANOVA analysis that there were not significant differences between parents' gender and their scores for the educational and financial needs, while there was a significant difference in their scores for social needs in favor of mothers of children with multiple disabilities. Thus, the results suggest that the perceived social needs of the families (mothers and fathers) of children with multiple disabilities were more important than the education and financial needs. Moreover, the educational needs based on the parent's level of education was significant with the mothers with high school diploma.

From two-way ANOVA teats, the financial needs based on the interaction between parents' gender and child's gender was significant in favor of fathers with female children with multiple disabilities, and the educational needs based on child's type of disability was significant in favor of children with deafness and other types of disabilities.

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APPENDICES

Appendix A

Questionnaire of

EDUCATIONAL, FINANCIAL, AND SOCIAL NEEDS OF MULTIPLE DISABILITY CHILDREN'S FAMILIES IN SAUDI ARABIA

Dear Parent:

I am a PhD student at University of Louisville, United States. I am currently carrying out a survey on the needs of families of children with multiple disabilities in the Kingdom of Saudi Arabia. Your contribution to this research is valuable and important to the outcome of the research. Therefore, I would be very grateful if you can help and support this research by completing the attached questionnaire.

As you know, children with multiple disabilities have a combination of different disabilities, which may include two types of disabilities or more. These disabilities include but are not limited; speech disabilities, physical disabilities, autism, mental retardation, visual disabilities, hearing disabilities, brain injury, and others. Moreover, they may be linked to many of the educational, financial, social needs for both the disabled child or his/her family.

All your completed answers will be treated confidentially. Many thanks for your interest and support.

Mohammed Alkohaiz
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Is your multiple-disability child's age between 5 and 18? *(The child must have two or more disabilities)*

YES ☐ **NO** ☐

If NO. Please **STOP**. You are not eligible to participate in this study.

Section I: FAMILY'S DEMOGRAPHIC INFORMATION

Please **check the appropriate box** with (✔) OR **fill the blank** in the following questions.

1. How many children do you have? *(Child defined as 0—18 years including both disabled and nondisabled)*

   ……

2. How many multiple-disability children do you have? *(Child defined as 5—18 years)*

   ……

3. In which institute does your multiple-disability child/children study?

	First child	Second child	Third child
The intellectual education institute in western Riyadh- male			
The intellectual education institute in western Riyadh- female			
The intellectual education institute in eastern Riyadh- male			
The intellectual education institute in eastern Riyadh- female			
Al-Noor Institutes for the Blind-male			
Al-Noor Institutes for the Blind-female			
Al-Amal Institutes for the Deaf in western Riyadh-male			
Al-Amal Institutes for the Deaf in eastern Riyadh-male			
Al-Amal Institutes for the Deaf in western Riyadh -female			
Al-Amal Institutes for the Deaf in eastern Riyadh-female			

4. In which grade does your multiple-disability child/children study?

#	First Child	Second Child	Third Child
Grade #	……	……	……

5. Why do you take your multiple-disability child/children to the institute? *(Please write your reason(s) for each child)*

	Reason #1	Reason #2	Reason #3
First Child	……	……	……
Second Child	……	……	……
Third Child	……	……	……

6. What kinds of disabilities does your multiple-disability child/children have? (please specify)

	First child	Second child	Third child
1	……	……	……
2	……	……	……
3	……	……	……
4	……	……	……
5	……	……	……

7. What is your multiple-disability child's/children's gender and age?

#	First Child	Second Child	Third Child
Gender (Male/Female)	……	……	……
Child age	……	……	……

8. What is your relationship with the multiple-disability child/children?

.....

9. How old are you?

.....

10. What is your current marital status?

Married	
Separated	
Divorced	
Widowed	
Other (please specify)	.....

11. What is your nationality?

.....

12. What is the highest education level you have completed?

Did not attend school	
Elementary	
Middle school	
High school	
Bachelor	
Master	
Doctorate	
Other (please specify)	.....

13. Are you?

Employed with government	
Employed with privet company	
Unemployed	
Retired	
Other (please specify)	.....

14. What is your monthly income? (***NOT*** *including any financial support you receive to help take care of your child)*

.....

15. How much financial support do you receive from the **GOVERNMENT**?

.....

16. How much financial support do you receive from the **CHARITIES**?

.....

17. What are the main supports that you get from the state to take care of your multiple-disability child/children? (Including: educational, financial, medical, and social support)

1	.....
2	.....
3	.....
4	.....
5	.....
6	.....

18. What are the main obstacles facing you in taking care of your multiple-disability child/children?

1	.....
2	.....
3	.....
4	.....
5	.....
6	.....

19. How satisfied are you with the supports you receive for your multiple-disability child/children at the present time? *(Please choose one)*

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

20. When you think of your current experiences as the parent of multiple-disability child/children, do you feel: (USE THE SCALE BELOW TO CHOOSE ONE RESPONSE FOR EACH ITEM THAT BEST APPLIES TO YOU)

	Very	Somewhat	Only a little	Not at all
Bothered OR Upset?				
Frustrated				
Emotionally worn out?				
Worried?				
Tense?				
Satisfied?				
Successful?				
Contented?				
Unsure of yourself?				

21. Presently, on average, what percentage of your time (between 0 and 100%)goes primarily towards your multiple- disability child's care during a typical weekday (FILL IN THE BLANK).....%, and during a typical weekend (FILL IN THE BLANK).....%.

22. Have you ever attended any training program about disabled children?

YES	NO

23. IF yes, what was this program about:

.....
.....
.....

Section II: FAMILY'S NEEDS

Directions

- Please carefully read each of the following items and decide to what extent you agree or disagree by checking the appropriate choice.

Example

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is important that we share information with the institute's staff in which our child studies.		✔			

	Educational Needs Dimension					
	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I need more information to understand my multiple-disability child's disabilities.					
2	I need more information about how to deal with my multiple-disability child's behavior in general.					
3	I need more information to know how to deal with my multiple-disability child's specific behavioral problems.					
4	I need more information on how to help my normal child/children cope with their multiple disability sibling(s).					
5	I need more training in dealing with the impact of my child's multiple disabilities on his/her sibling(s).					
6	I need more help in how to explain my multiple-disability child's condition to his or her sibling(s).					
7	I need more training in methods of emergency medical intervention with my multiple-disability child/children.					
8	I need more training in methods of overall intervention with my multiple-disability child/children.					
9	I need more information about any program(s) designed to help me to work with my multiple-disability child/children.					
10	I need more information on the services that are presently available for my multiple-disability child/children.					
11	I need more information on services available to my multiple-disability child/ children from the Ministry of Education.					
12	I need more information on services available to my multiple-disability child/ children from the Ministry of Health.					
13	I need more information on services available to my multiple-disability child/ children from the Ministry of Social Affairs.					
14	I need counseling to how to cope with my multiple-disability child/children					
15	I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my multiple-disability child's condition.					

Financial Needs Dimension						
	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
16	I need additional financial support from the state to provide better care for my multiple-disability child/children.					
17	I need additional financial support to secure comfortable, safe, and appropriate transport for my multiple-disability child/children.					
18	I need additional financial support to provide additional educational lessons for my multiple-disability child/children at home.					
19	I need additional financial support to provide the needs of my multiple-disability child/ children for treatment and medical care.					
20	I need additional financial support to provide suitable entertainment for my multiple-disability child/children.					
21	I need additional financial help in paying for expenses of my multiple-disability child/ children such as food, housing, or clothing.					
22	I need additional financial support to pay for the services of a domestic worker to help take care of my multiple-disability child/children.					
23	I need additional financial help in getting special equipment for my multiple-disability child's needs.					
24	The governmental financial support is enough to meet all my multiple-disability child's needs.					
25	The charity financial support is enough to meet all my multiple-disability child's needs.					
Social Needs Dimension						
	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
26	I need moral support from relatives to help my multiple-disability child/ children.					
27	I need to have someone in my family that I can talk to more about my problems.					
28	I need to have more friends that I can talk to about my multiple-disability child/children.					
29	I need to meet more regularly with a counselor (e.g. psychologist, social worker, psychiatrist) to talk about how to cope with my experiences.					
30	I need to have more opportunities to meet and to talk with other parents of multiple-disability children.					
31	I need more help in explaining my multiple-disability child's condition to my partner/spouse.					
32	I need more help in explaining my multiple-disability child's condition to my partner/spouse's family members.					
33	My partner/spouse needs help in accepting our multiple-disability child's condition.					
34	I need help in explaining my multiple-disability child's condition to other children (such as my children's friends).					

Appendix B

Questionnaire of Educational, Financial, and Social Needs of Multiple Disability Children's Families in Saudi Arabia (Arabic Version)

الاستبانة رقم: (.....)

بسم الله الرحمن الرحيم

استبانة حول

الإحتياجات التعليمية، المالية، والإجتماعية لأسر الأطفال متعددي العوق بالمملكة العربية السعودية

عزيزي ولي الامر، عزيزتي ولية الامر

السلام عليكم ورحمة الله وبركاته،،،

أنا طالب الدكتوراة بجامعة لويزفيل بالولايات المتحدة الامريكية والمحاضر بجامعة الملك سعود، قسم الدراسات الاجتماعية. اقوم بجمع استبيان عن احتياجات أسر الاطفال متعددي العوق في المملكة العربية السعودية. مساهمتك في هذه الدراسة مهمة ومفيدة لنتائج الدراسة، وبالتالي اكون ممتناً لمساعدتك و دعمك لهذه الدراسة من خلال إكمالك الاجابة عن اسئلة الاستبانة المرفقة التي تم تصميمها تحديداً بهدف جمع معلومات عن الاحتياجات التعليمية والمالية والاجتماعية لأسر الاطفال متعددي العوق في المملكة العربية السعودية.

كما تعلمون، الاطفال ذوي الإعاقات المتعددة لديها مزيج من مختلف الإعاقات التي قد تشمل إعاقتين أو أكثر. وهذه الاعاقات تشمل: إعاقات الكلام، الإعاقات الحركية ، التوحد، التخلف العقلي، الاعاقات البصرية، الاعاقات السمعية، إصابات الدماغ، وربما غيرها. وعلاوة على ذلك، فإنها يمكن أن ترتبط بالعديد من الاحتياجات التعليمية، المالية، أوالاجتماعية سواء للطفل المعاق او اسرته.

عزيزي/ عزيزتي:

مساهمتكم في هذا البحث هي قيمة وهامة لنتائج البحث. لذا، فإن اجابتكم بكل صدق وامانة على اسئلة الاستبيان مهمة جداً وستثري هذه الدراسة، مع الاخذ بالاعتبار انه ليس هناك اجابة خاطئة او اجابة صحيحة انما المطلوب رايكم فقط . كما انه سيتم التعامل مع اجابتكم بمنتهى السرية حيث لا يوجد اي طريقة لتحديد هويتكم.

ختاماً، إذا كان لديكم أي استفسار الرجاء الكتابة او الاتصال بالباحث على (0557400500) maalko01@louisville.edu كما يمكنكم كتابة ملاحظاتكم في نهاية الاستبيان.

شاكرا لكم ما تبذلونه من وقت وجهد مثمر بإذن الله
أخوكم/ محمد بن عبدالرحمن القحيز

تعليمات تعبئة الاستبانة:

1. أرجوا قراءة كل سؤال على حدة.
2. ثم، ضَع علامة (✔) في المربع المجاور لأفضل خيار ترونه مناسباً.
3. أو، املئ الفراغ بما ترونه مناسباً.

هل عمر ابنكم/ابنتكم متعدد العوق يتراوح بين ٥ و ١٨ سنة؟ (الطفل/ـة يجب ان يكون لديه اعاقتين او اكثر)

نعم ☐ لا ☐

إذا كانت اجابتكم " **لا**" الرجاء **التوقف** عن الاجابة . هذه الدراسة لا تشملكم

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القسم الأول: البيانات الأولية للأسرة

الرجاء ضع علامة (✔) أمام الخيار المناسب أو إملأ الفراغ بالإجابة المناسبة

1. كم طفل/ـة لديكم "الطفل هو من يتراوح عمره بين (٠ ـ ١٨) سنة ، ولد أو بنت معاق أو غير معاق"؟

.....

2. كم طفل/ـة لديكم من ذوي تعدد العوق في سن المدرسة "يتراوح عمره بين ٥ إلى ١٨ سنة" ؟

.....

3. في أي معهد يدرس ابنكم/ ابنتكم من ذوي تعدد العوق ؟

	الطفل الأول	الطفل الثاني	الطفل الثالث
معهد التربية الفكرية بغرب الرياض ـ بنين			
معهد التربية الفكرية بغرب الرياض ـ بنات			
معهد التربية الفكرية بشرق الرياض ـ بنين			
معهد التربية الفكرية بشرق الرياض ـ بنات			
معهد النور للمكفوفين ـ بنين			
معهد النور للمكفوفات ـ بنات			
معهد الامل بغرب الرياض ـ بنين			
معهد الامل بغرب الرياض ـ بنات			
معهد الامل بشرق الرياض ـ بنين			
معهد الامل بشرق الرياض ـ بنات			

4. في أي فصل دراسي يدرس ابنكم/ابنتكم من ذوي تعدد العوق

	الطفل الأول	الطفل الثاني	الطفل الثالث
الفصل الدراسي			

5. ما هو المتوقع من ابنكم/ ابنتكم متعدد العوق عند ذهابه للمعهد (الرجاء الكتابة بالتفصيل)؟

	السبب الأول	السبب الثاني	السبب الثالث
الطفل الأول	.....	.....	.....
الطفل الثاني	.....	.....	.....
الطفل الثالث	.....	.....	.....

6. ما نوع الإعاقات التي يعاني منها طفلكم/ أطفالكم من ذوي تعدد العوق؟ (الرجاء التحديد بالتفصيل)

م	الطفل الأول	الطفل الثاني	الطفل الثالث
١	.....	.....	.....
٢	.....	.....	.....
٣	.....	.....	.....
٤	.....	.....	.....
٥	.....	.....	.....

7. ما هو جنس وعمر ابنكم / ابنتكم من ذوي تعدد العوق؟

م	الطفل الأول	الطفل الثاني	الطفل الثالث
جنس الطفل (ذكر أو انثى)	.....	.....	.....
عمر الطفل	.....	.....	.....

8. ما هي صلة قرابتكم بالطفل/ ـة من ذوي تعدد العوق (مثلا: اب، ام، جد، خال، أو عمة وهكذا)؟

.....

9. كم عمرك؟

.....

10. ما هي حالتك الاجتماعية؟

متزوج/ـة	
منفصل/ـة	
مطلق/ـة	
أرمل/أرملة	
أخرى (الرجاء التحديد بالتفصيل)	

11. ما هي جنسيتك؟

.....

12. ما هي أعلى شهادة علمية حصلت/تِ عليها؟

المستوى التعليمي	
لم أحصل على شهادة علمية	
الابتدائي	
المتوسط	
الثانوي	
جامعي	
ماجستير	
دكتوراه	
أخرى (الرجاء التحديد بالتفصيل)	.....

13. هل أنت/ انتِ؟

موظف حكومي	
موظف قطاع خاص	
غير موظف	
متقاعد	
أخرى تذكر (الرجاء حدد بالتفصيل)	.....

14. ما هو دخلكم الشهري؟ (الدخل الشهري لا يشمل المساعدات المالية التي قد تحصلون عليها سواءاً من الحكومة أو من الجمعيات الخيرية لرعاية طفلكم/طفلتكم متعدد العوق)

الرجاء التحديد بالريال :.....

15. كم تبلغ قيمة المساعدات المالية التي تحصلون عليها من الحكومة سنوياً؟

الرجاء التحديد بالريال :.....

16. كم تبلغ قيمة المساعدات المالية التي تحصلون عليها من الجمعيات الخيرية سنوياً؟

الرجاء التحديد بالريال :.....

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17. ما هي المساعدات التي تحصلون عليها من الحكومة لرعاية طفلكم/طفلتكم متعدد العوق (تشمل المساعدات التعليمية، والمالية، والطبية، والاجتماعية)؟

١	.....
٢	.....
٣	.....
٤	.....
٥	.....
٦	.....

18. ما هي أهم العقبات التي تواجهكم اثناء رعايتكم لطفلكم/طفلتكم متعدد العوق ؟

١	.....
٢	.....
٣	.....
٤	.....
٥	.....
٦	.....

19. ما هي درجة رضاكم عن المساعدات (حكومية ـ الجمعيات الخيرية) التي تحصلون عليها لرعاية ابنكم/ ابنتكم من ذوي تعدد العوق (الرجاء اختيار خيار واحد فقط)؟

غير راضي تماماً	غير راضي	لست راضي أو غير راضي	راضي	راضي تماماً

20. عندما تفكر/ين في خبرتك الحالية كولي أمر لطفل /ـة متعدد العوق هل تشعر بأنك:
(استخدم المقياس في الاسفل لتحديد استجابة واحدة لكل عبارة)

العبارة	دائماً	قليلاً	نادراً	ابداً
منزعج أو متضايق				
محبط				
منهك عاطفياً				
قلق				
متوتر				
راضي				
ناجح				
قانع				
غير متأكد من نفسك				

21. نسبياً؛ في المتوسط، ما هي نسبة وقتك (يتراوح بين ٠ إلى ١٠٠٪) المخصص لرعاية طفلك/ طفلتك متعدد العوق خلال: أيام الأسبوع (إملأ الفراغ)..... ٪، وخلال الإجازة الأسبوعية (إملأ الفراغ)..... ٪.

22. هل سبق لكم أن حضرتم برنامج تدريبي عن الأطفال المعاقين؟

نعم	لا

23. إذا كانت الإجابة بـ نعم: عن ماذا كان البرنامج/ البرامج؟

.....
.....
.....
.....

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القسم الثاني: احتياجات الاسرة

تعليمات:

الرجاء قراءة كل عبارة من العبارات التالية بعناية ومن ثم قرر إلى أي مدى توافق أو لا توافق عن طريق التحقق من الاختيار المناسب.

مثال:

العبارة	اوافق بشدة	اوافق	محايد	ارفض	ارفض بشدة
من الأهمية بمكان أن أشارك المعلومات مع موظفي المعهد الذي يدرس فيه طفلي/ طفلتي متعدد العوق.					✓

بُعد الاحتياجات التعليمية						
م	العبارة	اوافق بشدة	اوافق	محايد	ارفض	ارفض بشدة
١	احتاج إلى المزيد من المعلومات لفهم إعاقات طفلي متعدد العوق.					
٢	احتاج إلى المزيد من المعلومات حول كيفية التعامل مع سلوك طفلي متعدد العوق بشكل عام.					
٣	احتاج إلى المزيد من المعلومات حول كيفية التعامل مع المشكلات السلوكية الخاصة بطفلي متعدد العوق.					
٤	احتاج إلى المزيد من المعلومات حول كيفية مساعدة أبنائي غير المعاقين في التعامل مع أخيهم أو أختهم متعدد العوق .					
٥	احتاج إلى المزيد من التدريب في التعامل مع الآثار الناجمة عن إعاقات طفلي متعدد العوق على أخوته أو أخواته.					
٦	احتاج إلى المزيد من المساعدة حول كيفية شرح الإعاقات التي يعاني منها طفلي متعدد العوق لاخوته و اخواته الغير معاقين.					
٧	احتاج إلى المزيد من تدريب على أساليب التدخل الطبي في حالات الطوارئ مع طفلي متعدد العوق					
٨	احتاج إلى المزيد من التدريب على أساليب التدخل الشامل مع طفلي متعدد العوق.					
٩	احتاج إلى المزيد من المعلومات حول أي برنامج مُصمم لمساعدتي للعمل مع طفلي متعدد العوق.					
١٠	احتاج إلى المزيد من المعلومات حول الخدمات المتوفرة حالياً لطفلي متعدد العوق.					
١١	أحتاج إلى المزيد من المعلومات حول الخدمات المتوفرة لطفلي متعدد العوق من قبل وزارة التعليم.					
١٢	أحتاج إلى المزيد من المعلومات حول الخدمات المتوفرة لطفلي متعدد العوق من قبل وزارة الصحة.					
١٣	أحتاج إلى المزيد من المعلومات حول الخدمات المتوفرة لطفلي متعدد العوق من قبل وزارة الشؤون الاجتماعية.					
١٤	احتاج إلى الإرشاد حول كيفية التعامل مع طفلي متعدد العوق.					
١٥	أحتاج إلى المساعدة في معرفة كيفية الرد عندما يسأل الاصدقاء، أو الجيران، أو الغرباء عن حالة طفلي متعدد العوق.					
بُعد الاحتياجات المالية						
#	العبارة	اوافق بشدة	اوافق	محايد	ارفض	ارفض بشدة
١٦	أحتاج دعم مالي إضافي من الدولة لتقديم رعاية أفضل لطفلي متعدد العوق.					
١٧	أحتاج دعم مالي إضافي لتامين وسيلة نقل مريحة، آمنة، ومناسبة لطفلي متعدد العوق.					
١٨	أحتاج دعم مالي إضافي لتوفير دروس تعليمية إضافية لطفلي متعدد العوق في المنزل.					
١٩	أحتاج دعم مالي إضافي لتوفير احتياجات العلاج والرعاية الطبية لطفلي متعدد العوق.					
٢٠	أحتاج دعم مالي إضافي لتوفير وسائل ترفيه مناسبة لطفلي متعدد العوق.					
٢١	أحتاج دعم مالي إضافي لتغطية نفقات ابني متعدد العوق مثل: الغذاء، الملابس).					

وزارة التعليم
إدارة التخطيط والتطوير
بنين
الإدارة العامة للتعليم بمنطقة الرياض

٢٢	أحتاج دعم مالي إضافي لتوفير عاملة منزلية لمساعدتي في رعاية طفلي متعدد العوق.					
٢٣	أحتاج دعم مالي اضافي لتوفير أجهزة خاصة باحتياجات طفلي متعدد العوق المتنوعة.					
٢٤	الدعم المالي الحكومي يكفي لتلبية احتياجات طفلي متعدد العوق.					
٢٥	الدعم المالي غير الحكومي (من جمعيات خيرية أو من فاعل خير) يكفي لتلبية احتياجات طفلي متعدد العوق.					
	بُعد الاحتياجات الاجتماعية					
#	العبارة	اوافق بشدة	اوافق	محايد	ارفض	ارفض بشدة
٢٦	أحتاج إلى دعم معنوي من الأقارب لمساعدة طفلي متعدد العوق.					
٢٧	أحتاج إلى شخص في عائلتي استطيع أن أتحدث إليه اكثر عن مشاكلي.					
٢٨	أحتاج إلى المزيد من الأصدقاء الذين استطيع التحدث معهم حول طفلي متعدد العوق.					
٢٩	أحتاج إلى عقد اجتماعات دورية مع مستشار، مثل: أخصائي نفسي، أخصائي اجتماعي، طبيب نفسي) للحديث عن كيفية التعامل مع تجربتي.					
٣٠	أحتاج إلى المزيد من الفرص للإلتقاء والتحدث مع أسر لديها أطفال متعددي العوق.					
٣١	أحتاج إلى المزيد من المساعدة لشرح حالة طفلي متعدد العوق لزوجي/ لزوجتي.					
٣٢	أحتاج إلى المزيد من المساعدة لشرح حالة طفلي متعدد العوق لأفراد أسرة زوجي/ زوجتي.					
٣٣	زوجي/ زوجتي بحاجة إلى مساعدة في فهم وقبول حالة طفلنا متعدد العوق.					
٣٤	أحتاج مساعدة في شرح حالة طفلي متعدد العوق للأطفال الآخرين، كأصدقائه، أو أطفال الحي الذي نسكن به).					
٣٥	أحتاج إلى توفير فرص تفاعل اجتماعي بين طفلي متعدد العوق والمجتمع مثل: (المشاركة في الرحلات والزيارات للأماكن العامة، أو الاشتراك في احتفالات اليوم الوطني وهكذا).					
٣٦	أحتاج إلى تغيير تصورات المجتمع تجاه إعاقات الأطفال من خلال برامج تلفزيونية وإذاعية متخصصة.					
٣٧	أحتاج إشراك طفلي متعدد العوق في الانشطة الخيرية التي تقيمها المؤسسات الحكومية، مثل: المعارض، حضور المناسبات الرياضية.					
٣٨	أحتاج إشراك طفلي متعدد العوق في الأنشطة الخيرية التي تقيمها الجمعيات والمؤسسات الخيرية، مثل: زيارة المرضى في المستشفيات وتقديم المساعدات لهم.					
٣٩	أحتاج تقبل المجتمع لطفلي متعدد العوق بغض النظر عن إعاقته/ إعاقتها.					
٤٠	كمقدم خدمة لطفل متعدد العوق، انا بحاجة إلى وقت لحضور المناسبات الاجتماعية الخاصة بي.					
٤١	أسرتي تحتاج إلى مساعدة في مناقشة المشاكل والتوصل إلى حلول لها.					
٤٢	أفراد أسرتي بحاجة للمساعدة في تعلم كيفية دعم بعضهم البعض خلال الأوقات الصعبة.					
٤٣	أحتاج للمساعدة في الحصول على الرعاية المناسبة لطفلي متعدد العوق أثناء وقت عملي الرسمي.					
٤٤	زوجي/ زوجتي يدعمني للعناية بطفلنا متعدد العوق.					

24. هل هناك احتياجات اخرى ترى ان اسرتك بحاجة اليها ولم يتم ذكرها في البنود المذكورة اعلاه (فضلاً اذكرها بالتفصيل)؟

.....
.....
.....
.....
.....

ختاماً شاكراً تعاونكم لاتها هذه الاستبانة
(الرجاء ضع الاستبانة في المضروف المرفق واعدها الى الباحث او المرشد/المرشدة الطلابي بالمعهد).

وزارة التعليم
إدارة التخطيط والتطوير
بيش

UNIVERSITY OF LOUISVILLE
KENT SCHOOL OF SOCIAL WORK
PATTERSON HALL, ROOM 201
LOUISVILLE KY 40292

Appendix C

Informed Consent Form (English Version)

UofL Institutional Review Boards
IRB NUMBER: 16.0416
IRB APPROVAL DATE: 05/05/2016
IRB EXPIRATION DATE: 05/04/2017

UNIVERSITY OF LOUISVILLE.

EDUCATIONAL, FINANCIAL, AND SOCIAL NEEDS OF MULTIPLE DISABILITY CHILDREN'S FAMILIES IN SAUDI ARABIA

Date: 4 / 22 / 2016

Dear Parent:

You are being invited to participate in a research study by answering the attached survey about multiple-disability children families' educational, financial, and social needs in Saudi Arabia. There are no known risks for your participation in this research study. The information collected may not benefit you directly. The information learned in this study may be helpful to others. The information you provide will help identify multiple-disability children families' perspectives toward their educational, financial, and social needs in Saudi Arabia. Your completed survey will be stored at The Kent School of Social Work in a locked file drawer. The survey will take approximately *20-25 minutes* time to complete.

Individuals from the Department of *Kent School of Social Work*, the Institutional Review Board (IRB), the Human Subjects Protection Program Office (HSPPO), and other regulatory agencies may inspect these records. In all other respects, however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

Taking part in this study is voluntary. By completing this survey you agree to take part in this research study. You do not have to answer any questions that make you uncomfortable. You may choose not to take part at all. If you decide to be in this study you may stop taking part at any time. If you decide not to be in this study or if you stop taking part at any time, you will not lose any benefits for which you may qualify.

If you have any questions, concerns, or complaints about the research study, please contact: Mohammed Alkohaiz at: +966557400500, +1(202) 830-5266 or e-mail at: maalko01@louisville or Bibhuti K. Sar, PhD at + 1 (502) 852-3932, b.k.sar@louisville.edu

If you have any questions about your rights as a research subject, you may call the Human Subjects Protection Program Office at (502) 852-5188. You can discuss any questions about your rights as a research subject, in private, with a member of the Institutional Review Board (IRB). You may also call this number if you have other questions about the research, and you cannot reach the research staff, or want to talk to someone else. The IRB is an independent committee made up of people from the University community, staff of the institutions, as well as people from the community not connected with these institutions. The IRB has reviewed this research study.

If you have concerns or complaints about the research or research staff and you do not wish to give your name, you may call +11-877-852-1167. This is a 24-hour hot line answered by people who do not work at the University of Louisville.

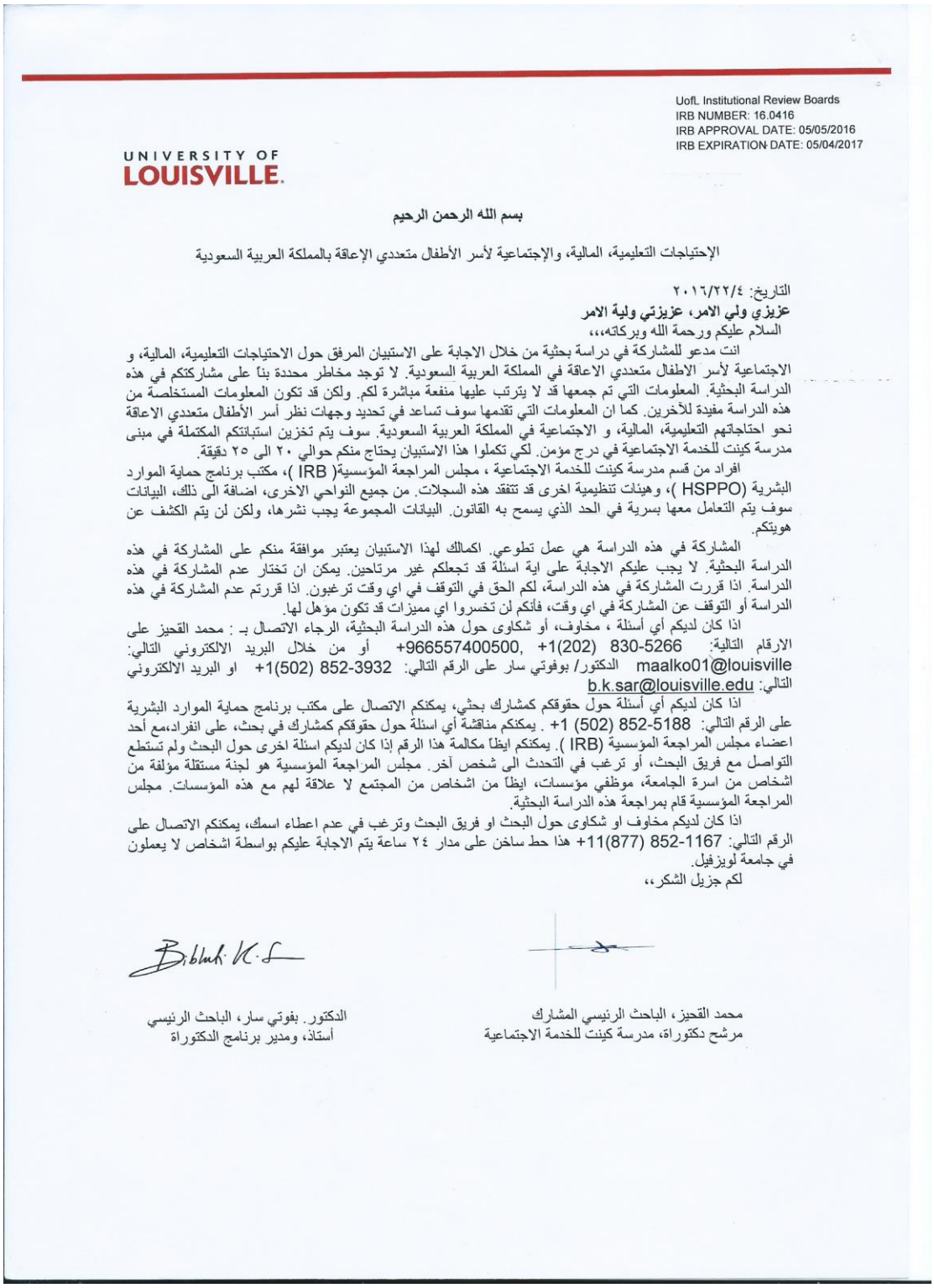
Sincerely,

Bibhuti K. Sar, PhD, Principal Investigator
Professor & Director, PhD Program

Mohammad Alkohaiz, Co-Principal Investigator
Doctoral Candidate, Kent School of Social Work

Appendix D

Informed Consent Form (Arabic Version)



UofL Institutional Review Boards
IRB NUMBER: 16.0416
IRB APPROVAL DATE: 05/05/2016
IRB EXPIRATION DATE: 05/04/2017

UNIVERSITY OF LOUISVILLE.

بسم الله الرحمن الرحيم

الإحتياجات التعليمية، المالية، والإجتماعية لأسر الأطفال متعددي الإعاقة بالمملكة العربية السعودية

التاريخ: ٢٠١٦/٢٢/٤

عزيزي ولي الامر، عزيزتي ولية الامر

السلام عليكم ورحمة الله وبركاته،،،

انت مدعو للمشاركة في دراسة بحثية من خلال الاجابة على الاستبيان المرفق حول الاحتياجات التعليمية، المالية، و الاجتماعية لأسر الاطفال متعددي الاعاقة في المملكة العربية السعودية. لا توجد مخاطر محددة بناً على مشاركتكم في هذه الدراسة البحثية. المعلومات التي تم جمعها قد لا يترتب عليها منفعة مباشرة لكم. ولكن قد تكون المعلومات المستخلصة من هذه الدراسة مفيدة للآخرين. كما ان المعلومات التي تقدمها سوف تساعد في تحديد وجهات نظر أسر الأطفال متعددي الاعاقة نحو احتاجاتهم التعليمية، المالية، و الاجتماعية في المملكة العربية السعودية. سوف يتم تخزين استبانتكم المكتملة في مبنى مدرسة كينت للخدمة الاجتماعية في درج مؤمن. لكي تكملوا هذا الاستبيان يحتاج منكم حوالي ٢٠ الى ٢٥ دقيقة.

افراد من قسم مدرسة كينت للخدمة الاجتماعية ، مجلس المراجعة المؤسسية(IRB)، مكتب برنامج حماية الموارد البشرية (HSPPO)، وهيئات تنظيمية اخرى قد تتفقد هذه السجلات. من جميع النواحي الاخرى، اضافة الى ذلك، البيانات سوف يتم التعامل معها بسرية في الحد الذي يسمح به القانون. البيانات المجموعة يجب نشرها، ولكن لن يتم الكشف عن هويتكم.

المشاركة في هذه الدراسة هي عمل تطوعي. اكمالك لهذا الاستبيان يعتبر موافقة منكم على المشاركة في هذه الدراسة البحثية. لا يجب عليكم الاجابة على اية اسئلة قد تجعلكم غير مرتاحين. يمكن ان تختار عدم المشاركة في هذه الدراسة. اذا قررت المشاركة في هذه الدراسة، لكم الحق في التوقف في اي وقت ترغبون. اذا قررتم عدم المشاركة في هذه الدراسة أو التوقف عن المشاركة في اي وقت، فأنكم لن تخسروا اي مميزات قد تكون مؤهل لها.

اذا كان لديكم أي أسئلة ، مخاوف، أو شكاوى حول هذه الدراسة البحثية، الرجاء الاتصال بـ : محمد القحيز على الارقام التالية: 830-5266 (202)1+ ,966557400500+ أو من خلال البريد الالكتروني التالي: maalko01@louisville الدكتور/ بوفوتي سار على الرقم التالي: 852-3932 (502)1+ او البريد الالكتروني التالي: b.k.sar@louisville.edu

اذا كان لديكم أي أسئلة حول حقوقكم كمشارك بحثي، يمكنكم الاتصال على مكتب برنامج حماية الموارد البشرية على الرقم التالي: 852-5188 (502) 1+ . يمكنكم مناقشة أي اسئلة حول حقوقكم كمشارك في بحث، على انفراد،مع أحد اعضاء مجلس المراجعة المؤسسية (IRB). يمكنكم ايظاً مكالمة هذا الرقم إذا كان لديكم اسئلة اخرى حول البحث ولم تستطع التواصل مع فريق البحث، أو ترغب في التحدث الى شخص آخر. مجلس المراجعة المؤسسية هو لجنة مستقلة مؤلفة من اشخاص من اسرة الجامعة، موظفي مؤسسات، ايظاً من اشخاص من المجتمع لا علاقة لهم مع هذه المؤسسات. مجلس المراجعة المؤسسية قام بمراجعة هذه الدراسة البحثية.

اذا كان لديكم مخاوف او شكاوى حول البحث او فريق البحث وترغب في عدم اعطاء اسمك، يمكنكم الاتصال على الرقم التالي: 852-1167 (877)11+ هذا حط ساخن على مدار ٢٤ ساعة يتم الاجابة عليكم بواسطة اشخاص لا يعملون في جامعة لويزفيل.

لكم جزيل الشكر،،

محمد القحيز، الباحث الرئيسي المشارك
مرشح دكتوراة، مدرسة كينت للخدمة الاجتماعية

الدكتور. بفوتي سار، الباحث الرئيسي
أستاذ، ومدير برنامج الدكتوراة

Appendix E

List of the Individual Questions Based on the Three Dimensions

#	
	Educational Needs Dimension
1	I need more information to understand my multiple-disability child's disabilities.
2	I need more information about how to deal with my child with multiple disabilities behavior in general.
3	I need more information to know how to deal with my multiple-disability child's specific behavioral problems.
4	I need more information on how to help my normal child/children cope with their multiple disability sibling(s).
5	I need more training in dealing with the impact of my child's multiple disabilities on his/her sibling(s).
6	I need more help in how to explain my child with multiple disabilities condition to his or her sibling(s).
7	I need more training in methods of emergency medical intervention with my child/children with multiple disabilities.
8	I need more training in methods of overall intervention with my child/children with multiple disabilities.
9	I need more information about any program(s) designed to help me to work with my child/children with multiple disabilities.
10	I need more information on the services that are presently available for my child/children with multiple disabilities.
11	I need more information on services available to my child/children with multiple disabilities from the Ministry of Education.
12	I need more information on services available to my child/children with multiple disabilities from the Ministry of Health.
13	I need more information on services available to my child/children with multiple disabilities from the Ministry of Social Affairs.
14	I need counseling to how to cope with my child/children with multiple disabilities
15	I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my child with multiple disabilities condition.
	Financial Needs Dimension
16	I need additional financial support from the state to provide better care for my child/children with multiple disabilities.
17	I need additional financial support to secure comfortable, safe, and appropriate transport for my child/children with multiple disabilities.
18	I need additional financial support to provide additional educational lessons for my child/children with multiple disabilities at home.
19	

	I need additional financial support to provide the needs of my child/children with multiple disabilities for treatment and medical care.
20	I need additional financial support to provide suitable entertainment for my child/children with multiple disabilities.
21	I need additional financial help in paying for expenses of my child/children with multiple disabilities such as food, housing, or clothing.
22	I need additional financial support to pay for the services of a domestic worker to help take care of my child/children with multiple disabilities.
23	I need additional financial help in getting special equipment for my child with multiple disabilities needs.
24	The governmental financial support is enough to meet all my child with multiple disabilities needs.
25	The charity financial support is enough to meet all my child with multiple disabilities needs.
	Social Needs Dimension
26	I need moral support from relatives to help my child/children with multiple disabilities.
27	I need to have someone in my family that I can talk to more about my problems.
28	I need to have more friends that I can talk to about my child/children with multiple disabilities.
29	I need to meet more regularly with a counselor (e.g. psychologist, social worker, psychiatrist) to talk about how to cope with my experiences.
30	I need to have more opportunities to meet and to talk with other parents of children with multiple disabilities.
31	I need more help in explaining my child with multiple disabilities condition to my partner/spouse.
32	I need more help in explaining my child with multiple disabilities condition to my partner/spouse's family members.
33	My partner/spouse needs help in accepting our child with multiple disabilities condition.
34	I need help in explaining my child with multiple disabilities condition to other children (such as my children's friends).
35	I need opportunities for social interaction between my child with multiple disabilities and my society (e.g., field trips and visits to public places, the National Day, and so on).
36	My society's perceptions about children's disabilities need to be changed via specialized programs on radio and television.
37	I need government agencies to involve my child with multiple disabilities in the activities they carry out (e.g., special exhibits, attending sport events.)
38	I need private agencies to involve my child with multiple disabilities in the activities they carry out (e.g., visits the sick in hospital and provide assistance to them)

39	I need my society to accept our child/children with multiple disabilities no matter what his/her disability is.
40	As care providers for a child with multiple disabilities, I need time to attend to my own social events.
41	My family needs help in discussing problems and reaching solutions.
42	My family needs help in learning how to support each other during difficult times.
43	I need help in getting appropriate care for my child/children with multiple disabilities during my work time.
44	My partner supports me in caring for my child/children with multiple disabilities.

Appendix F

Results of one-way ANOVA test for each item of the three dimensions based on parents' gender

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#	Item	Gender	N	Mean	SD	Level of Significance	Partial Eta Squared (Effect size)	Observed Power[a]
Educational Needs Dimension								
1	I need more information to understand my multiple-disability child's disabilities.	Fathers	98	4.0816	.82078	.324	.005	.166
		Mothers	98	4.1939	.76869			
2	I need more information about how to deal with my child with multiple disabilities behavior in general.	Fathers	98	4.2857	.75982	.453	.003	.116
		Mothers	98	4.2041	.75926			
3	I need more information to know how to deal with my multiple-disability child's specific behavioral problems.	Fathers	98	4.2347	.83482	.523	.002	.098
		Mothers	98	4.3061	.72380			
4	I need more information on how to help my normal child/children cope with their multiple disability sibling(s).	Fathers	98	4.0000	.87343	.110	.013	.358
		Mothers	98	4.2041	.90769			
5	I need more training in dealing with the impact of my child's multiple disabilities on his/her sibling(s).	Fathers	98	3.8878	.79797	.004	.041	.821
		Mothers	98	4.2245	.83148			
6	I need more help in how to explain my child with multiple disabilities condition to his or her sibling(s).	Fathers	98	3.8163	.90071	.016	.030	.680
		Mothers	98	4.1327	.91536			
7	I need more training in methods of emergency medical intervention with my child/children with multiple disabilities.	Fathers	98	4.3878	.82027	.009	.035	.749
		Mothers	98	4.6633	.62498			
8	I need more training in methods of overall intervention with my child/children with multiple disabilities.	Fathers	98	4.2959	.86405	.001	.059	.933
		Mothers	98	4.6633	.59107			
9	I need more information about any program(s) designed to help me to work with my child/children with multiple disabilities.	Fathers	98	4.5102	.81538	1.000	.000	.050
		Mothers	98	4.5102	.80264			
10	I need more information on the services that are presently available for my child/children with multiple disabilities.	Fathers	98	4.6224	.71096	.570	.002	.087
		Mothers	98	4.6735	.53295			
11	I need more information on services available to my child/children with multiple disabilities from the Ministry of Education.	Fathers	98	4.6633	.59107	.894	.000	.052
		Mothers	98	4.6735	.47135			
12	I need more information on services available to my child/children with multiple disabilities from the Ministry of Health.	Fathers	98	4.6429	.59638	.791	.000	.058
		Mothers	98	4.6633	.47502			
13	I need more information on services available to my child/children with multiple disabilities from the Ministry of Social Affairs.	Fathers	98	4.6122	.60296	.355	.004	.152
		Mothers	98	4.6837	.46743			
14	I need counseling to how to cope with my child/children with multiple disabilities	Fathers	98	4.0102	.93605	.082	.016	.413
		Mothers	98	4.2347	.85917			

15	I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my child with multiple disabilities condition.	Fathers	98	3.6531	.86277	.698	.001	.067
		Mothers	98	3.6020	.97113			
Financial Needs Dimension								
16	I need additional financial support from the state to provide better care for my child/children with multiple disabilities.	Fathers	98	4.7653	.51375	.379	.004	.142
		Mothers	98	4.6939	.61608			
17	I need additional financial support to secure comfortable, safe, and appropriate transport for my child/children with multiple disabilities.	Fathers	98	4.7449	.63101	.456	.003	.115
		Mothers	98	4.8061	.51087			
18	I need additional financial support to provide additional educational lessons for my child/children with multiple disabilities at home.	Fathers	98	4.5816	.75878	.381	.004	.141
		Mothers	98	4.4796	.86429			
19	I need additional financial support to provide the needs of my child/children with multiple disabilities for treatment and medical care.	Fathers	98	4.7347	.66660	.456	.003	.115
		Mothers	98	4.6633	.67264			
20	I need additional financial support to provide suitable entertainment for my child/children with multiple disabilities.	Fathers	98	4.5816	.83633	.324	.005	.166
		Mothers	98	4.6939	.75174			
21	I need additional financial help in paying for expenses of my child/children with multiple disabilities such as food, housing, or clothing.	Fathers	98	3.5714	1.35464	.273	.006	.194
		Mothers	98	3.3469	1.49984			
22	I need additional financial support to pay for the services of a domestic worker to help take care of my child/children with multiple disabilities.	Fathers	98	4.6837	.74053	.278	.006	.191
		Mothers	98	4.7857	.56074			
23	I need additional financial help in getting special equipment for my child with multiple disabilities needs.	Fathers	98	4.7245	.68535	.144	.011	.309
		Mothers	98	4.8469	.46200			
24	The governmental financial support is enough to meet all my child with multiple disabilities needs.	Fathers	98	4.1224	1.17767	.701	.001	.067
		Mothers	98	4.1837	1.04878			
25	The charity financial support is enough to meet all my child with multiple disabilities needs.	Fathers	98	4.2551	1.07752	.526	.002	.097
		Mothers	98	4.3469	.94271			
Social Needs Dimension								
26	I need moral support from relatives to help my child/children with multiple disabilities.	Fathers	98	3.5510	1.25281	.493	.002	.105
		Mothers	98	3.6735	1.24168			
27	I need to have someone in my family that I can talk to more about my problems.	Fathers	98	3.3571	1.27020	.645	.001	.075
		Mothers	98	3.4388	1.20194			
28	I need to have more friends that I can talk to about my child/children with multiple disabilities.	Fathers	98	3.1837	1.22976	.951	.000	.050
		Mothers	98	3.1735	1.07479			
29	I need to meet more regularly with a counselor (e.g. psychologist, social worker, psychiatrist) to talk about	Fathers	98	3.8061	1.13663	.409	.004	.131
		Mothers	98	3.9286	.92223			

	how to cope with my experiences.							
30	I need to have more opportunities to meet and to talk with other parents of children with multiple disabilities.	Fathers	98	3.9082	.96417	**.017**	.029	.671
		Mothers	98	**4.2347**	.92837			
31	I need more help in explaining my child with multiple disabilities condition to my partner/spouse.	Fathers	98	3.0000	1.06490	**.032**	.023	.573
		Mothers	98	**3.3469**	1.18498			
32	I need more help in explaining my child with multiple disabilities condition to my partner/spouse's family members.	Fathers	98	2.9490	1.22156	**.031**	.024	.581
		Mothers	98	**3.3265**	1.20801			
33	My partner/spouse needs help in accepting our child with multiple disabilities condition.	Fathers	98	2.6735	1.23335	**.023**	.026	.624
		Mothers	98	**3.0816**	1.26551			
34	I need help in explaining my child with multiple disabilities condition to other children (such as my children's friends).	Fathers	98	3.5510	1.04657	**.002**	.048	.875
		Mothers	98	**3.9898**	.91375			
35	I need opportunities for social interaction between my child with multiple disabilities and my society (e.g., field trips and visits to public places, the National Day, and so on).	Fathers	98	4.5510	.67538	**.000**	.063	.948
		Mothers	98	**4.8367**	.39829			
36	My society's perceptions about children's disabilities need to be changed via specialized programs on radio and television.	Fathers	98	4.5816	.70233	**.019**	.028	.656
		Mothers	98	**4.7857**	.48162			
37	I need government agencies to involve my child with multiple disabilities in the activities they carry out (e.g., special exhibits, attending sport events.)	Fathers	98	4.5612	.64323	.099	.014	.378
		Mothers	98	4.7041	.55999			
38	I need private agencies to involve my child with multiple disabilities in the activities they carry out (e.g., visits the sick in hospital and provide assistance to them)	Fathers	98	4.4184	.74507	**.025**	.026	.611
		Mothers	98	**4.6429**	.64616			
39	I need my society to accept our child/children with multiple disabilities no matter what his/her disability is.	Fathers	98	4.4796	.70681	**.003**	.045	.853
		Mothers	98	**4.7347**	.44377			
40	As care providers for a child with multiple disabilities, I need time to attend to my own social events.	Fathers	98	3.7551	1.07513	.596	.001	.082
		Mothers	98	3.8469	1.33434			
41	My family needs help in discussing problems and reaching solutions.	Fathers	98	3.3571	1.06732	**.002**	.049	.884
		Mothers	98	**3.8163**	.95623			
42	My family needs help in learning how to support each other during difficult times.	Fathers	98	3.3367	1.08356	**.000**	.069	.964
		Mothers	98	**3.8878**	.95121			
43	I need help in getting appropriate care for my child/children with multiple disabilities during my work time.	Fathers	98	3.837	1.0020	.054	.019	.489
		Mothers	98	4.122	1.0578			
44	My partner supports me in caring for my child/children with multiple disabilities.	Fathers	98	4.3776	.80610	**.039**	.022	.544
		Mothers	98	4.0918	1.09438			

Appendix G

Results of one-way ANOVA test for each item of the three dimensions based on parents' Level of Education

Item #	Item	Level of education	N	Mean	SD	Level of Significance	Partial Eta Squared (effect size)	Observed Power[a]
Educational Needs Dimension								
1	I need more information to understand my multiple-disability child's disabilities.	Did not attend school	21	4.2381	.94365	**.041**	.051	.713
		Elementary	20	3.7000	1.08094			
		Middle school	**33**	**4.2727**	.80128			
		High school	65	4.2615	.69094			
		Post High school	57	4.0351	.68046			
2	I need more information about how to deal with my child with multiple disabilities behavior in general.	Did not attend school	21	4.1429	.91026	**.036**	.052	.730
		Elementary	20	3.8000	1.00525			
		Middle school	33	4.3030	.76994			
		High school	**65**	**4.4000**	.70267			
		Post High school	57	4.2281	.59814			
3	I need more information to know how to deal with my child with multiple disabilities specific behavioral problems.	Did not attend school	21	4.0952	.83095	**.004**	.076	.898
		Elementary	20	3.7000	.92338			
		Middle school	33	4.2727	.80128			
		High school	**65**	**4.4000**	.76649			
		Post High school	57	4.3860	.61975			
4	I need more information on how to help my normal child/children cope with their multiple disability sibling(s).	Did not attend school	21	3.7619	.88909	**.001**	.089	.945
		Elementary	20	3.4500	.94451			
		Middle school	**33**	**4.2727**	.87581			
		High school	65	4.1846	.86408			
		Post High school	57	4.2632	.81342			
5	. I need more training in dealing with the impact of my child's multiple disabilities on his/her sibling(s).	Did not attend school	21	3.8095	.87287	.128	.037	.545
		Elementary	20	3.7000	.86450			
		Middle school	33	4.1818	.76871			
		High school	65	4.1077	.83147			
		Post High school	57	4.1404	.81149			
6	I need more help in how to explain my child with multiple disabilities condition to his or her sibling(s).	Did not attend school	21	3.5714	1.02817	.052	.048	.682
		Elementary	20	3.6000	.94032			
		Middle school	33	4.0606	.82687			
		High school	65	4.0769	.90671			
		Post High school	57	4.0877	.89204			
7	I need more training in methods of emergency medical intervention with my child/children with multiple disabilities.	Did not attend school	21	4.3333	1.11056	**.040**	.051	.715
		Elementary	20	4.5000	.82717			
		Middle school	33	4.2424	.83030			
		High school	65	4.5846	.60962			
		Post High school	**57**	**4.7018**	.56584			
8	I need more training in methods of overall intervention with my child/children with multiple disabilities.	Did not attend school	21	4.3810	1.07127	.106	.039	.576
		Elementary	20	4.3500	.87509			
		Middle school	33	4.2121	.78093			
		High school	65	4.5846	.63473			
		Post High school	57	4.5965	.67770			
9	I need more information about any program(s) designed to help me to work with my child/children with multiple disabilities.	Did not attend school	21	4.2857	1.10195	.081	.042	.620
		Elementary	20	4.1500	1.22582			
		Middle school	33	4.4545	.75378			
		High school	65	4.6000	.65670			
		Post High school	57	4.6491	.64063			
10	I need more information on the services that are presently available for my child/children with multiple disabilities.	Did not attend school	21	4.5714	.74642	.267	.027	.405
		Elementary	20	4.5000	.82717			
		Middle school	33	4.5455	.66572			
		High school	65	4.6462	.64785			
		Post High school	57	4.7895	.41131			
11	I need more information on services available to my child/children with multiple disabilities from the Ministry of Education.	Did not attend school	21	4.5714	.50709	.485	.018	.273
		Elementary	20	4.5500	.75915			
		Middle school	33	4.6061	.65857			
		High school	65	4.7385	.44289			
		Post High school	57	4.7018	.46155			
12	I need more information on services available to my child/children with multiple disabilities from the Ministry of Health.	Did not attend school	21	4.5714	.50709	.324	.024	.364
		Elementary	20	4.6000	.75394			
		Middle school	33	4.5152	.66714			
		High school	65	4.7385	.44289			
		Post High school	57	4.6842	.46896			

13	I need more information on services available to my child/children with multiple disabilities from the Ministry of Social Affairs	Did not attend school	21	4.6190	.49761	.709	.011	.178
		Elementary	20	4.6000	.75394			
		Middle school	33	4.5455	.66572			
		High school	65	4.6769	.47129			
		Post High school	57	4.7018	.46155			
14	I need counseling to how to cope with my child/children with multiple disabilities	Did not attend school	21	3.9524	1.16087	**.014**	.063	.819
		Elementary	20	3.9500	1.14593			
		Middle school	33	3.8182	.84611			
		High school	65	4.1077	.88606			
		Post High school	**57**	**4.4386**	.65513			
15	I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my child with multiple disabilities condition.	Did not attend school	21	3.2857	.95618	**.001**	.099	.967
		Elementary	20	3.0000	1.16980			
		Middle school	33	3.5152	.97215			
		High school	65	3.7385	.85288			
		Post High school	**57**	**3.9123**	.68870			
Financial Needs Dimension								
16	I need additional financial support from the state to provide better care for my child/children with multiple disabilities.	Did not attend school	21	4.4762	.92839	.022	.058	.783
		Elementary	20	4.7500	.44426			
		Middle school	33	4.7879	.41515			
		High school	65	4.8769	.33108			
		Post High school	57	4.6140	.67492			
17	I need additional financial support to secure comfortable, safe, and appropriate transport for my child/children with multiple disabilities.	Did not attend school	21	4.9048	.30079	.125	.037	.549
		Elementary	20	4.7500	.71635			
		Middle school	33	4.6970	.68396			
		High school	65	4.8923	.35895			
		Post High school	57	4.6491	.69414			
18	I need additional financial support to provide additional educational lessons for my child/children with multiple disabilities at home.	Did not attend school	21	4.4762	.81358	.840	.007	.130
		Elementary	20	4.3500	.93330			
		Middle school	33	4.5152	.79535			
		High school	65	4.5692	.84722			
		Post High school	57	4.5789	.75468			
19	I need additional financial support to provide the needs of my child/children with multiple disabilities for treatment and medical care	Did not attend school	21	4.6667	.79582	.429	.020	.301
		Elementary	20	4.6000	.50262			
		Middle school	33	4.7273	.62614			
		High school	65	4.8154	.60962			
		Post High school	57	4.5965	.75261			
20	I need additional financial support to provide suitable entertainment for my child/children with multiple disabilities.	Did not attend school	21	4.6190	.80475	.277	.026	.398
		Elementary	20	4.3500	1.08942			
		Middle school	33	4.6970	.63663			
		High school	65	4.7692	.67937			
		Post High school	57	4.5614	.86639			
21	I need additional financial help in paying for expenses of my child/children with multiple disabilities such as food, housing, or clothing.	Did not attend school	21	3.7143	1.34695	.002	.083	.927
		Elementary	20	3.5000	1.67017			
		Middle school	33	4.0909	1.07132			
		High school	65	3.5385	1.45856			
		Post High school	57	2.8947	1.35863			
22	I need additional financial support to pay for the services of a domestic worker to help take care of my child/children with multiple disabilities.	Did not attend school	21	4.6667	.79582	.092	.041	.600
		Elementary	20	4.4000	1.18766			
		Middle school	33	4.8182	.58387			
		High school	65	4.8462	.40430			
		Post High school	57	4.7018	.59656			
23	I need additional financial help in getting special equipment for my child with multiple disabilities needs.	Did not attend school	21	4.6190	.92066	.725	.011	.172
		Elementary	20	4.8500	.36635			
		Middle school	33	4.8182	.39167			
		High school	65	4.8000	.59161			
		Post High school	57	4.7895	.58970			
24	The governmental financial support is enough to meet all my child with multiple disabilities needs	Did not attend school	21	4.0000	1.14018	.043	.050	.707
		Elementary	20	4.0500	.99868			
		Middle school	33	4.4848	.87039			
		High school	65	4.3385	1.04995			
		Post High school	57	3.8421	1.26476			
25	The charity financial support is enough to meet all my child with multiple disabilities needs	Did not attend school	21	4.2857	1.00712	.259	.027	.411
		Elementary	20	4.2000	.69585			
		Middle school	33	4.5455	.86930			
		High school	65	4.4000	.98107			
		Post High school	57	4.0877	1.18443			

Social Needs Dimension								
26	I need moral support from relatives to help my child/children with multiple disabilities	Did not attend school	21	3.3810	1.20317	.095	.040	.595
		Elementary	20	4.0000	1.25656			
		Middle school	33	3.3030	1.42489			
		High school	65	3.4923	1.25154			
		Post High school	57	3.8772	1.08677			
27	I need to have someone in my family that I can talk to more about my problems.	Did not attend school	21	2.9524	1.11697	.145	.035	.523
		Elementary	20	3.5500	1.31689			
		Middle school	33	3.3333	1.42887			
		High school	65	3.2769	1.20556			
		Post High school	57	3.6842	1.12055			
28	I need to have more friends that I can talk to about my child/children with multiple disabilities.	Did not attend school	21	2.9048	.94365	.000	.106	.979
		Elementary	20	2.5000	1.14708			
		Middle school	33	3.0606	1.27327			
		High school	65	3.0769	1.09413			
		Post High school	57	3.7018	1.03449			
29	I need to meet more regularly with a counselor (e.g. psychologist, social worker, psychiatrist) to talk about how to cope with my experiences.	Did not attend school	21	3.3810	.97346	.032	.054	.742
		Elementary	20	3.5500	1.31689			
		Middle school	33	4.1818	1.01411			
		High school	65	3.9846	.87486			
		Post High school	57	3.8421	1.06552			
30	I need to have more opportunities to meet and to talk with other parents of children with multiple disabilities.	Did not attend school	21	3.6667	1.27802	.084	.042	.613
		Elementary	20	3.7500	1.16416			
		Middle school	33	4.1212	.85723			
		High school	65	4.1231	.89281			
		Post High school	57	4.2456	.82982			
31	I need more help in explaining my child with multiple disabilities condition to my partner/spouse.	Did not attend school	21	3.2381	1.22085	.855	.007	.124
		Elementary	20	2.9500	1.35627			
		Middle school	33	3.2727	1.15306			
		High school	65	3.1231	1.15255			
		Post High school	57	3.2281	1.01801			
32	I need more help in explaining my child with multiple disabilities condition to my partner/spouse's family members.	Did not attend school	21	2.8095	1.12335	.360	.022	.341
		Elementary	20	3.0000	1.29777			
		Middle school	33	3.2727	1.28142			
		High school	65	3.0308	1.19856			
		Post High school	57	3.3509	1.23189			
33	My partner/spouse needs help in accepting our child with multiple disabilities condition.	Did not attend school	21	2.8571	1.31475	.688	.012	.186
		Elementary	20	2.9500	1.39454			
		Middle school	33	3.1212	1.36376			
		High school	65	2.7231	1.29310			
		Post High school	57	2.8947	1.11298			
34	I need help in explaining my child with multiple disabilities condition to other children (such as my children's friends).	Did not attend school	21	3.8571	.91026	.246	.028	.422
		Elementary	20	3.3000	1.34164			
		Middle school	33	3.7576	1.22552			
		High school	65	3.7846	.97616			
		Post High school	57	3.8947	.74843			
35	I need opportunities for social interaction between my child with multiple disabilities and my society (e.g., field trips and visits to public places, the National Day, and so on).	Did not attend school	21	4.6667	.48305	.070	.044	.641
		Elementary	20	4.5500	.82558			
		Middle school	33	4.7273	.45227			
		High school	65	4.5846	.65889			
		Post High school	57	4.8596	.39815			
36	My society's perceptions about children's disabilities need to be changed via specialized programs on radio and television.	Did not attend school	21	4.7143	.46291	.610	.014	.217
		Elementary	20	4.5500	.82558			
		Middle school	33	4.6970	.46669			
		High school	65	4.6308	.69752			
		Post High school	57	4.7719	.53511			
37	I need government agencies to involve my child with multiple disabilities in the activities they carry out (e.g., special exhibits, attending sport events.)	Did not attend school	21	4.7619	.43644	.356	.023	.344
		Elementary	20	4.5500	.75915			
		Middle school	33	4.5758	.61392			
		High school	65	4.5538	.63813			
		Post High school	57	4.7368	.55183			
38	I need private agencies to involve my child with multiple disabilities in the activities they carry out (e.g., visits the sick in hospital and provide assistance to them)	Did not attend school	21	4.8095	.40237	.203	.031	.460
		Elementary	20	4.4000	.99472			
		Middle school	33	4.3636	.69903			
		High school	65	4.5385	.70880			
		Post High school	57	4.5614	.65513			

39	I need my society to accept our child/children with multiple disabilities no matter what his/her disability is.	Did not attend school	21	4.7619	.43644	.325	.024	.364
		Elementary	20	4.5000	.60698			
		Middle school	33	4.6667	.47871			
		High school	65	4.5077	.68746			
		Post High school	57	4.6667	.60749			
40	As care providers for a child with multiple disabilities, I need time to attend to my own social events.	Did not attend school	21	3.8571	1.52597	.640	.013	.205
		Elementary	20	3.4500	1.31689			
		Middle school	33	3.9697	.91804			
		High school	65	3.8462	1.13510			
		Post High school	57	3.7544	1.28564			
41	My family needs help in discussing problems and reaching solutions.	Did not attend school	21	3.6190	1.20317	.908	.005	.105
		Elementary	20	3.4500	.99868			
		Middle school	33	3.6364	1.11294			
		High school	65	3.5231	1.07685			
		Post High school	57	3.6667	.91287			
42	My family needs help in learning how to support each other during difficult times.	Did not attend school	21	3.7143	1.00712	.806	.008	.143
		Elementary	20	3.4000	1.09545			
		Middle school	33	3.6364	1.08450			
		High school	65	3.5538	1.07574			
		Post High school	57	3.7018	1.03449			
43	I need help in getting appropriate care for my child/children with multiple disabilities during my work time.	Did not attend school	21	3.810	1.0305	.133	.036	.539
		Elementary	20	3.700	1.2183			
		Middle school	33	4.061	1.0589			
		High school	65	3.846	1.1072			
		Post High school	57	4.246	.8298			
44	My partner supports me in caring for my child/children with multiple disabilities.	Did not attend school	21	4.0000	1.00000	.391	.021	.323
		Elementary	20	4.0000	1.12390			
		Middle school	33	4.2424	1.11888			
		High school	65	4.2308	.91462			
		Post High school	57	4.4035	.86313			

Appendix H

The Results of the "One Way ANOVA" of the Differences between the Responses of the Participants According to their responses on each item of the three dimensions based on Parents' monthly income level.

Item #	Item	Parents' monthly income level	N	Mean	SD	Level of Significance	Partial Eta Squared (effect size)	Observed Power[a]
Educational Needs Dimension								
1	I need more information to understand my multiple-disability child's disabilities.	From 1SR to less than 6000SR	40	4.0250	.97369	.901	.002	.066
		From 6000SR to less than 10000SR	56	4.0536	.84034			
		More than 10000SR	36	4.1111	.62234			
2	I need more information about how to deal with my child with multiple disabilities behavior in general.	From 1SR to less than 6000SR	40	4.2500	.92681	.472	.012	.176
		From 6000SR to less than 10000SR	56	4.1607	.75743			
		More than 10000SR	36	4.3611	.54263			
3	I need more information to know how to deal with my child with multiple disabilities specific behavioral problems.	From 1SR to less than 6000SR	40	4.2500	.92681	.439	.013	.189
		From 6000SR to less than 10000SR	56	4.1964	.84034			
		More than 10000SR	36	4.4167	.60356			
4	I need more information on how to help my normal child/children cope with their multiple disability sibling(s).	From 1SR to less than 6000SR	40	4.0000	.84732	.314	.018	.252
		From 6000SR to less than 10000SR	56	3.9107	.85868			
		More than 10000SR	36	4.1944	.92023			
5	. I need more training in dealing with the impact of my child's multiple disabilities on his/her sibling(s).	From 1SR to less than 6000SR	40	4.0500	.81492	.182	.026	.358
		From 6000SR to less than 10000SR	56	3.8036	.81842			
		More than 10000SR	36	4.0833	.76997			
6	I need more help in how to explain my child with multiple disabilities condition to his or her sibling(s).	From 1SR to less than 6000SR	40	4.0000	.75107	.105	.034	.458
		From 6000SR to less than 10000SR	56	3.6607	.95873			
		More than 10000SR	36	4.0000	.95618			
7	I need more training in methods of emergency medical intervention with my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.4000	.84124	.790	.004	.086
		From 6000SR to less than 10000SR	56	4.4464	.91293			
		More than 10000SR	36	4.5278	.60880			
8	I need more training in methods of overall intervention with my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.3250	.85896	.880	.002	.069
		From 6000SR to less than 10000SR	56	4.3393	.93957			
		More than 10000SR	36	4.4167	.69179			
9	I need more information about any program(s) designed to help me to work with my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.5250	.93336	.755	.004	.094
		From 6000SR to less than 10000SR	56	4.4107	.94920			
		More than 10000SR	36	4.5278	.65405			

10	I need more information on the services that are presently available for my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.6750	.72986	.780	.004	.088
		From 6000SR to less than 10000SR	56	4.5893	.68162			
		More than 10000SR	36	4.6667	.53452			
11	I need more information on services available to my child/children with multiple disabilities from the Ministry of Education.	From 1SR to less than 6000SR	40	4.6750	.72986	.633	.007	.124
		From 6000SR to less than 10000SR	56	4.6964	.46396			
		More than 10000SR	36	4.5833	.50000			
12	I need more information on services available to my child/children with multiple disabilities from the Ministry of Health.	From 1SR to less than 6000SR	40	4.6250	.74032	.731	.005	.099
		From 6000SR to less than 10000SR	56	4.6786	.47125			
		More than 10000SR	36	4.5833	.50000			
13	I need more information on services available to my child/children with multiple disabilities from the Ministry of Social Affairs	From 1SR to less than 6000SR	40	4.6750	.72986	.765	.004	.092
		From 6000SR to less than 10000SR	56	4.6071	.49281			
		More than 10000SR	36	4.5833	.50000			
14	I need counseling to how to cope with my child/children with multiple disabilities	From 1SR to less than 6000SR	40	4.0500	1.03651	.978	.000	.053
		From 6000SR to less than 10000SR	56	4.0714	1.07631			
		More than 10000SR	36	4.0278	.73625			
15	I need help in knowing how to respond when friends, neighbors, or strangers ask questions about my child with multiple disabilities condition.	From 1SR to less than 6000SR	40	3.7000	1.06699	.993	.000	.051
		From 6000SR to less than 10000SR	56	3.6786	.91666			
		More than 10000SR	36	3.6944	.70991			
Financial Needs Dimension								
16	I need additional financial support from the state to provide better care for my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.7250	.45220	.918	.001	.063
		From 6000SR to less than 10000SR	56	4.6964	.76085			
		More than 10000SR	36	4.7500	.50000			
17	I need additional financial support to secure comfortable, safe, and appropriate transport for my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.6500	.73554	**.040**	.049	.618
		From 6000SR to less than 10000SR	56	4.9286	.32233			
		More than 10000SR	36	4.6944	.66845			
18	I need additional financial support to provide additional educational lessons for my child/children with multiple disabilities at home.	From 1SR to less than 6000SR	40	4.5250	.78406	.762	.004	.092
		From 6000SR to less than 10000SR	56	4.4821	.85261			
		More than 10000SR	36	4.6111	.80277			
19	I need additional financial support to provide the needs of	From 1SR to less than 6000SR	40	4.8000	.46410	.641	.007	.121
		From 6000SR to less than 10000SR	56	4.6964	.73657			

	my child/children with multiple disabilities for treatment and medical care	More than 10000SR	36	4.6667	.71714			
20	I need additional financial support to provide suitable entertainment for my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.6000	.74421	.313	.018	.253
		From 6000SR to less than 10000SR	56	4.7143	.67995			
		More than 10000SR	36	4.4444	1.08086			
21	I need additional financial help in paying for expenses of my child/children with multiple disabilities such as food, housing, or clothing.	From 1SR to less than 6000SR	40	3.8000	1.39963	.108	.034	.454
		From 6000SR to less than 10000SR	56	3.2679	1.27195			
		More than 10000SR	36	3.1944	1.58239			
22	I need additional financial support to pay for the services of a domestic worker to help take care of my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.7000	.91147	.976	.000	.054
		From 6000SR to less than 10000SR	56	4.7321	.61765			
		More than 10000SR	36	4.7222	.56625			
23	I need additional financial help in getting special equipment for my child with multiple disabilities needs.	From 1SR to less than 6000SR	40	4.8750	.33493	.513	.010	.161
		From 6000SR to less than 10000SR	56	4.7321	.75054			
		More than 10000SR	36	4.7500	.64918			
24	The governmental financial support is enough to meet all my child with multiple disabilities needs	From 1SR to less than 6000SR	40	4.3250	.94428	.322	.017	.248
		From 6000SR to less than 10000SR	56	3.9643	1.30683			
		More than 10000SR	36	4.0556	1.16972			
25	The charity financial support is enough to meet all my child with multiple disabilities needs	From 1SR to less than 6000SR	40	4.5000	.96077	.236	.022	.307
		From 6000SR to less than 10000SR	56	4.1429	1.16664			
		More than 10000SR	36	4.1944	.95077			
Social Needs Dimension								
26	I need moral support from relatives to help my child/children with multiple disabilities	From 1SR to less than 6000SR	40	3.6500	1.31168	.852	.002	.074
		From 6000SR to less than 10000SR	56	3.5179	1.33473			
		More than 10000SR	36	3.6389	1.12511			
27	I need to have someone in my family that I can talk to more about my problems.	From 1SR to less than 6000SR	40	3.5250	1.35850	.797	.004	.085
		From 6000SR to less than 10000SR	56	3.3929	1.31673			
		More than 10000SR	36	3.3333	1.14642			
28	I need to have more friends that I can talk to about my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	3.2500	1.27601	.884	.002	.069
		From 6000SR to less than 10000SR	56	3.1429	1.22739			
		More than 10000SR	36	3.2500	1.15573			
29	I need to meet more regularly with a counselor (e.g. psychologist, social worker, psychiatrist)	From 1SR to less than 6000SR	40	4.0000	1.13228	.219	.023	.322
		From 6000SR to less than 10000SR	56	3.6250	1.13718			
		More than 10000SR	36	3.9167	1.02470			

	to talk about how to cope with my experiences.							
30	I need to have more opportunities to meet and to talk with other parents of children with multiple disabilities.	From 1SR to less than 6000SR	40	4.1500	1.05125	.315	.018	.252
		From 6000SR to less than 10000SR	56	3.8393	1.10826			
		More than 10000SR	36	4.0278	.73625			
31	I need more help in explaining my child with multiple disabilities condition to my partner/spouse.	From 1SR to less than 6000SR	40	3.2750	1.21924	.373	.015	.220
		From 6000SR to less than 10000SR	56	3.0714	1.10958			
		More than 10000SR	36	2.9167	.99642			
32	I need more help in explaining my child with multiple disabilities condition to my partner/spouse's family members.	From 1SR to less than 6000SR	40	3.3750	1.31437	.118	.033	.438
		From 6000SR to less than 10000SR	56	3.1250	1.29422			
		More than 10000SR	36	2.7778	1.09834			
33	My partner/spouse needs help in accepting our child with multiple disabilities condition.	From 1SR to less than 6000SR	40	3.1500	1.47718	.062	.042	.549
		From 6000SR to less than 10000SR	56	2.5893	1.12455			
		More than 10000SR	36	2.6111	1.04957			
34	I need help in explaining my child with multiple disabilities condition to other children (such as my children's friends).	From 1SR to less than 6000SR	40	3.6250	1.25448	.356	.016	.229
		From 6000SR to less than 10000SR	56	3.7857	.92862			
		More than 10000SR	36	3.4722	.87786			
35	I need opportunities for social interaction between my child with multiple disabilities and my society (e.g., field trips and visits to public places, the National Day, and so on).	From 1SR to less than 6000SR	40	4.7250	.59861	.275	.020	.278
		From 6000SR to less than 10000SR	56	4.5357	.68661			
		More than 10000SR	36	4.6944	.52478			
36	My society's perceptions about children's disabilities need to be changed via specialized programs on radio and television.	From 1SR to less than 6000SR	40	4.6500	.62224	.955	.001	.057
		From 6000SR to less than 10000SR	56	4.6250	.70227			
		More than 10000SR	36	4.6667	.63246			
37	I need government agencies to involve my child with multiple disabilities in the activities they carry out (e.g., special exhibits, attending sport events.)	From 1SR to less than 6000SR	40	4.7750	.42290	.095	.036	.476
		From 6000SR to less than 10000SR	56	4.5000	.68755			
		More than 10000SR	36	4.6111	.64488			
38	I need private agencies to involve my child with multiple disabilities in the activities they carry out (e.g., visits the sick in hospital	From 1SR to less than 6000SR	40	4.6250	.62788	.391	.014	.211
		From 6000SR to less than 10000SR	56	4.4286	.73502			
		More than 10000SR	36	4.4722	.73625			

	and provide assistance to them)							
39	I need my society to accept our child/children with multiple disabilities no matter what his/her disability is.	From 1SR to less than 6000SR	40	4.6000	.67178	.795	.004	.085
		From 6000SR to less than 10000SR	56	4.5714	.59870			
		More than 10000SR	36	4.5000	.73679			
40	As care providers for a child with multiple disabilities, I need time to attend to my own social events.	From 1SR to less than 6000SR	40	3.9500	1.03651	.232	.022	.311
		From 6000SR to less than 10000SR	56	3.7679	1.23570			
		More than 10000SR	36	3.5000	1.10841			
41	My family needs help in discussing problems and reaching solutions.	From 1SR to less than 6000SR	40	3.6250	1.14774	.342	.016	.236
		From 6000SR to less than 10000SR	56	3.5179	.97218			
		More than 10000SR	36	3.2778	1.05860			
42	My family needs help in learning how to support each other during difficult times.	From 1SR to less than 6000SR	40	3.6000	1.12774	.156	.028	.386
		From 6000SR to less than 10000SR	56	3.6071	1.00324			
		More than 10000SR	36	3.1944	1.14191			
43	I need help in getting appropriate care for my child/children with multiple disabilities during my work time.	From 1SR to less than 6000SR	40	3.825	1.1297	.412	.014	.201
		From 6000SR to less than 10000SR	56	3.804	.9985			
		More than 10000SR	36	4.083	.9964			
44	My partner supports me in caring for my child/children with multiple disabilities.	From 1SR to less than 6000SR	40	4.2500	1.05612	.899	.002	.066
		From 6000SR to less than 10000SR	56	4.2500	.89949			
		More than 10000SR	36	4.3333	.79282			

a. Computed using alpha = .05

** Sig at p=0.01 and less

Appendix I

The Results of the "two Way ANOVA" of the Differences between the Responses of the Participants According to their responses on Education needs Dimension by Parents' Gender and Child's with Multiple Disabilities Gender.

UNIANOVA Fathers and Mothers Education needs scores BY Parents' Gender and Child with Multiple Disabilities Gender

Between-Subjects Factors

		Value Label	N
Parents Gender	1.00	Male	98
	2.00	Female	98
7.1 What is your child with multiple disabilities gender?	1.00	Male	140
	2.00	Female	56

Descriptive Statistics

Dependent Variable: Father's and Mother's total Education needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Deviation	N
male	Male	63.0714	9.92628	70
	Female	65.2857	5.21293	28
	Total	63.7041	8.86928	98
female	Male	65.4571	6.54236	70
	Female	66.0714	5.24883	28
	Total	65.6327	6.18009	98
Total	Male	64.2643	8.46118	140
	Female	65.6786	5.19828	56
	Total	64.6684	7.68530	196

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Father's and Mother's total Education needs scores

F	df1	df2	Sig.
6.828	3	192	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + Parents Gender + child with multiple disabilities Gender + Parents Gender * child with multiple disabilities Gender

Tests of Between-Subjects Effects

Dependent Variable: Father's and Mother's total Education needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	287.858[a]	3	95.953	1.641	.181	.025	4.922	.426
Intercept	675405.845	1	675405.845	11547.881	.000	.984	11547.881	1.000
Parents Gender	100.580	1	100.580	1.720	.191	.009	1.720	.257
child with multiple disabilities Gender	80.008	1	80.008	1.368	.244	.007	1.368	.214
Parents Gender * child with multiple disabilities Gender	25.600	1	25.600	.438	.509	.002	.438	.101
Error	11229.586	192	58.487					
Total	831189.000	196						
Corrected Total	11517.444	195						

a. R Squared = .025 (Adjusted R Squared = .010)

b. Computed using alpha = .05

Estimated Marginal Means

1. Parents Gender

Dependent Variable: Father's and Mother's total Education needs scores

Parents Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	64.179	.855	62.492	65.865
Female	65.764	.855	64.078	67.451

2. 7.1 What is your child with multiple disabilities gender?

Dependent Variable: Father's and Mother's total Education needs scores

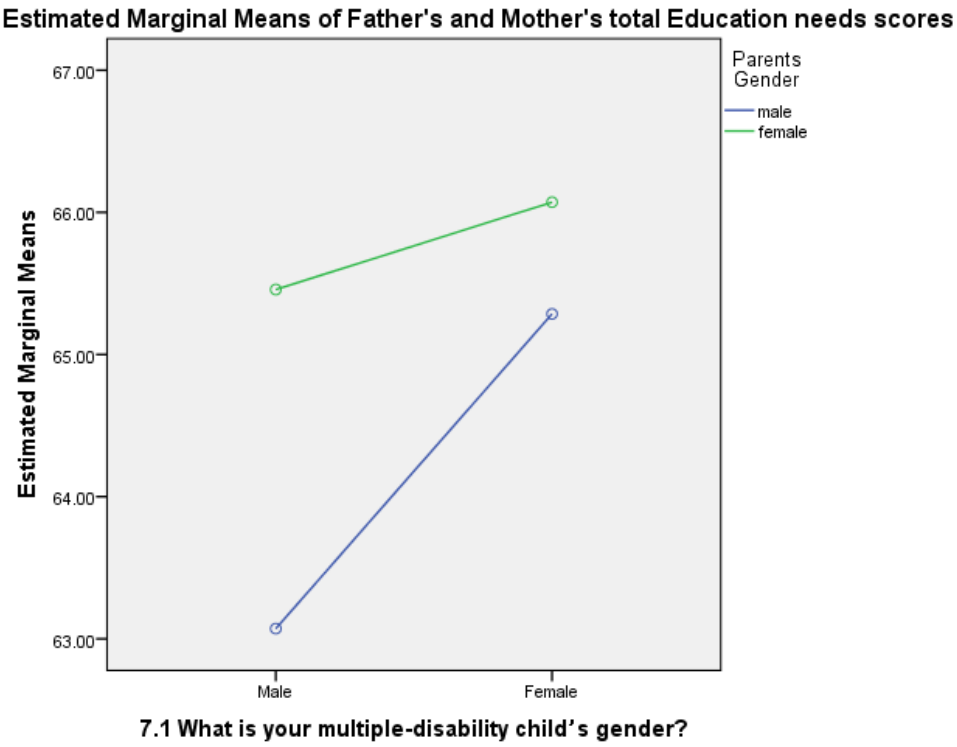
7.1 What is your child with multiple disabilities gender?	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	64.264	.646	62.989	65.539
Female	65.679	1.022	63.663	67.694

3. Parents Gender * 7.1 What is your child with multiple disabilities gender?

Dependent Variable: Father's and Mother's total Education needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Male	Male	63.071	.914	61.269	64.874
	Female	65.286	1.445	62.435	68.136
Female	Male	65.457	.914	63.654	67.260
	Female	66.071	1.445	63.221	68.922

Profile Plots



Appendix J

The Results of the "two Way ANOVA" of the Differences between the Responses of the Participants According to their responses on Financial Needs Dimension by Parents' Gender and Child's with Multiple Disabilities Gender.

UNIANOVA Fathers and Mothers Financial Needs Scores BY Parents' Gender and Child with Multiple Disabilities Gender

Between-Subjects Factors

		Value Label	N
Parents Gender	1.00	Male	98
	2.00	Female	98
7.1 What is your child with multiple disabilities gender?	1.00	Male	140
	2.00	Female	56

Descriptive Statistics

Dependent Variable: Father's and Mother's total Financial needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Deviation	N
Male	Male	39.4714	4.41907	70
	Female	41.3571	3.09377	28
	Total	40.0102	4.15795	98
Female	Male	39.9714	3.62748	70
	Female	39.3214	3.61123	28
	Total	39.7857	3.61626	98
Total	Male	39.7214	4.03593	140
	Female	40.3393	3.48648	56
	Total	39.8980	3.88815	196

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Father's and Mother's total Financial needs scores

F	df1	df2	Sig.
1.444	3	192	.231

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + Parents Gender + child with multiple disabilities Gender + Parents Gender * child with multiple disabilities Gender

Tests of Between-Subjects Effects

Dependent Variable: Father's and Mother's total Financial needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	82.038[a]	3	27.346	1.832	.143	.028	5.496	.471
Intercept	256388.719	1	256388.719	17176.547	.000	.989	17176.547	1.000
Parents Gender	23.584	1	23.584	1.580	.210	.008	1.580	.240
child with multiple disabilities Gender	15.270	1	15.270	1.023	.313	.005	1.023	.172
Parents Gender * child with multiple disabilities Gender	64.298	1	64.298	4.308	.039	.022	4.308	.542
Error	2865.921	192	14.927					
Total	314950.000	196						
Corrected Total	2947.959	195						

a. R Squared = .028 (Adjusted R Squared = .013)

b. Computed using alpha = .05

Estimated Marginal Means

1. Parents Gender

Dependent Variable: Father's and Mother's total Financial needs scores

Parents Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	40.414	.432	39.562	41.266
Female	39.646	.432	38.794	40.498

2. 7.1 What is your child with multiple disabilities gender?

Dependent Variable: Father's and Mother's total Financial needs scores

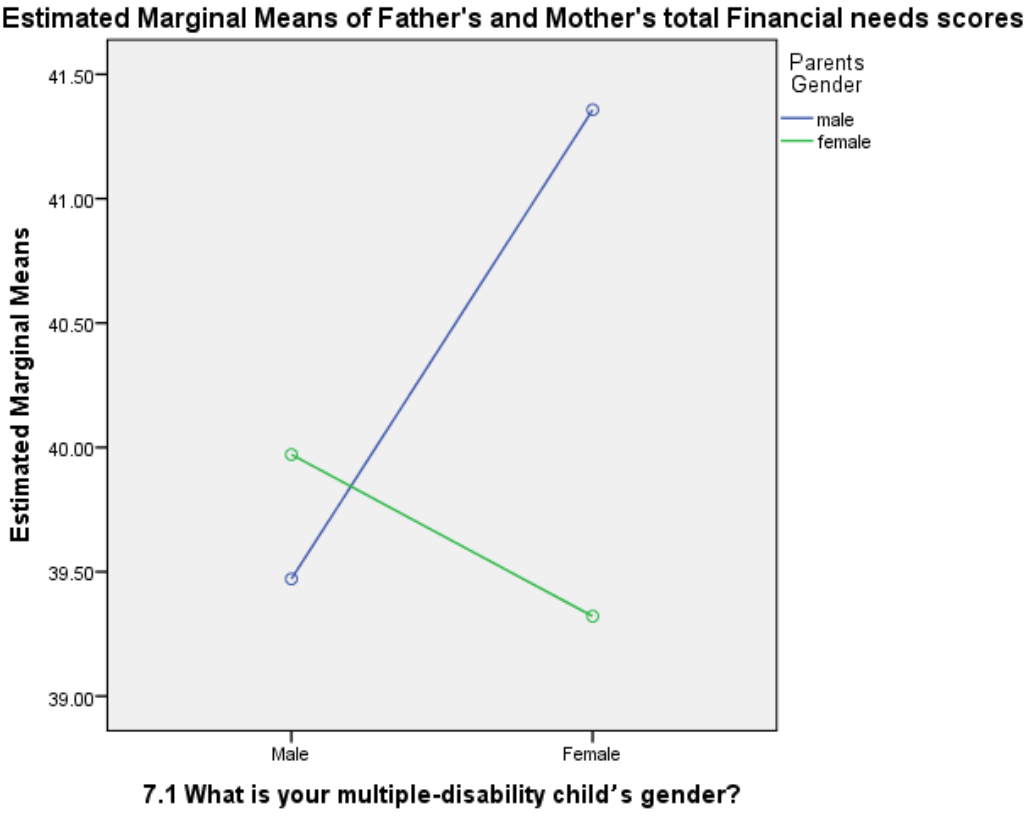
7.1 What is your child with multiple disabilities gender?	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	39.721	.327	39.077	40.365
Female	40.339	.516	39.321	41.358

3. Parents Gender * 7.1 What is your child with multiple disabilities gender?

Dependent Variable: Father's and Mother's total Financial needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Male	Male	39.471	.462	38.561	40.382
	Female	41.357	.730	39.917	42.797
Female	Male	39.971	.462	39.061	40.882
	Female	39.321	.730	37.881	40.762

Profile Plots



Appendix K

The Results of the "two Way ANOVA" of the Differences between the Responses of the Participants According to their responses on Social Needs Dimension by Parents' Gender and Child's with Multiple Disabilities Gender.

UNIANOVA Fathers and Mothers Social needs scores BY Parents' Gender and child with multiple disabilities Gender

Between-Subjects Factors

		Value Label	N
Parents Gender	1.00	Male	98
	2.00	Female	98
7.1 What is your child with multiple disabilities gender?	1.00	Male	140
	2.00	Female	56

Descriptive Statistics

Dependent Variable: Fathers' and Mothers' total Social needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Deviation	N
Male	Male	70.7571	9.91184	70
	Female	72.4286	9.73892	28
	Total	71.2347	9.84184	98
Female	Male	75.7857	8.50727	70
	Female	75.3571	8.15232	28
	Total	75.6633	8.36776	98
Total	Male	73.2714	9.54267	140
	Female	73.8929	9.02054	56
	Total	73.4490	9.37768	196

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Fathers' and Mothers' total Social needs scores

F	df1	df2	Sig.
1.000	3	192	.394

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + Parents Gender + child with multiple disabilities Gender + Parents Gender * child with multiple disabilities Gender

Tests of Between-Subjects Effects

Dependent Variable: Fathers' and Mothers' total Social needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	1020.547[a]	3	340.182	4.050	.008	.060	12.149	.837
Intercept	866293.080	1	866293.080	10313.049	.000	.982	10313.049	1.000
Parents Gender	633.161	1	633.161	7.538	.007	.038	7.538	.780
child with multiple disabilities Gender	15.447	1	15.447	.184	.669	.001	.184	.071
Parents Gender * child with multiple disabilities Gender	44.100	1	44.100	.525	.470	.003	.525	.111
Error	16127.943	192	84.000					
Total	1074520.000	196						
Corrected Total	17148.490	195						

a. R Squared = .060 (Adjusted R Squared = .045)

b. Computed using alpha = .05

Estimated Marginal Means

1. Parents Gender

Dependent Variable: Fathers' and Mothers' total Social needs scores

Parents Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	71.593	1.025	69.572	73.614
Female	75.571	1.025	73.550	77.593

2. 7.1 What is your child with multiple disabilities gender?

Dependent Variable: Fathers' and Mothers' total Social needs scores

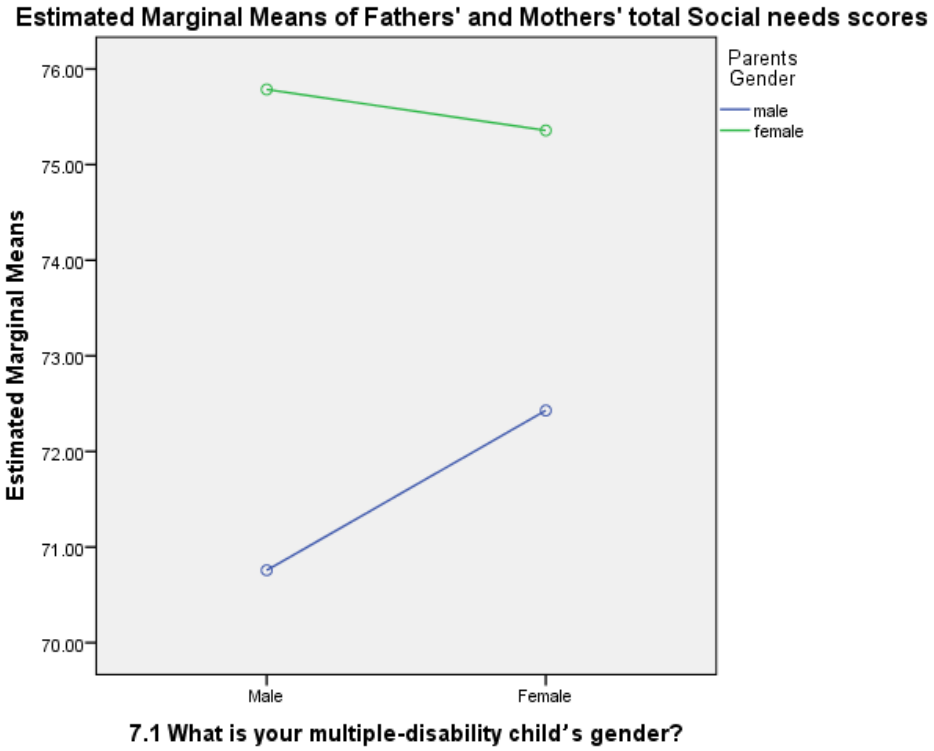
7.1 What is your child with multiple disabilities gender?	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	73.271	.775	71.744	74.799
Female	73.893	1.225	71.477	76.309

3. Parents Gender * 7.1 What is your child with multiple disabilities gender?

Dependent Variable: Fathers' and Mothers' total Social needs scores

Parents Gender	7.1 What is your child with multiple disabilities gender?	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Male	Male	70.757	1.095	68.596	72.918
	Female	72.429	1.732	69.012	75.845
Female	Male	75.786	1.095	73.625	77.946
	Female	75.357	1.732	71.941	78.773

Profile Plots



Appendix L

The Results of the "two Way ANOVA" of the Differences between the Responses of the Participants According to their responses on each item of the three dimensions by Parents' Gender and Child's Type of Disability.

UNIANOVA Fathers and Mothers Education needs scores BY Parents' Gender and Child' Type of disability

Univariate Analysis of Variance

Between-Subjects Factors

		Value Label	N
Multiple-Disability Child's Type of Disabilities	1.00	Intellectual + Other	132
	2.00	Blindness + Other	32
	3.00	Deafness + Other	30
Parents Gender	1.00	Father	97
	2.00	Mother	97

Descriptive Statistics

Dependent Variable: Father's and Mother's total Education needs scores

Multiple-Disability Child's Type of Disabilities	Parents Gender	Mean	Std. Deviation	N
Intellectual + Other	Father	61.9091	9.57357	66
	Mother	64.8485	6.98403	66
	Total	63.3788	8.47676	132
Blindness + Other	Father	66.6250	6.25966	16
	Mother	66.0625	3.45386	16
	Total	66.3437	4.98132	32
Deafness + Other	Father	68.2000	5.44059	15
	Mother	68.7333	3.43234	15
	Total	68.4667	4.47779	30
Total	Father	63.6598	8.90445	97
	Mother	65.6495	6.20994	97
	Total	64.6546	7.72113	194

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Father's and Mother's total Education needs scores

F	df1	df2	Sig.
4.968	5	188	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + Child Type of disability + Parents Gender + Child Type of disability * Parents Gender

Tests of Between-Subjects Effects

Dependent Variable: Father's and Mother's total Education needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	1031.901[a]	5	206.380	3.704	.003	.090	18.522	.927
Intercept	544338.354	1	544338.354	9770.479	.000	.981	9770.479	1.000
Child Type of disability	742.115	2	371.057	6.660	.002	.066	13.320	.910
Parents Gender	29.343	1	29.343	.527	.469	.003	.527	.112
Child Type of disability * Parents Gender	97.781	2	48.890	.878	.417	.009	1.755	.200
Error	10473.960	188	55.713					
Total	822469.000	194						
Corrected Total	11505.861	193						

a. R Squared = .090 (Adjusted R Squared = .065)

b. Computed using alpha = .05

Estimated Marginal Means

1. child with multiple disabilities Type of Disabilities

Dependent Variable: Father's and Mother's total Education needs scores

child with multiple disabilities Type of Disabilities	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Intellectual + Other	63.379	.650	62.097	64.660
Blindness + Other	66.344	1.319	63.741	68.947
Deafness + Other	68.467	1.363	65.778	71.155

2. Parents Gender

Dependent Variable: Father's and Mother's total Education needs scores

Parents Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Father	65.578	.945	63.714	67.443
Mother	66.548	.945	64.684	68.413

3. child with multiple disabilities Type of Disabilities * Parents Gender

Dependent Variable: Father's and Mother's total Education needs scores

child with multiple disabilities Type of Disabilities	Parents Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Intellectual + Other	Father	61.909	.919	60.097	63.722
	Mother	64.848	.919	63.036	66.661
Blindness + Other	Father	66.625	1.866	62.944	70.306
	Mother	66.062	1.866	62.381	69.744
Deafness + Other	Father	68.200	1.927	64.398	72.002
	Mother	68.733	1.927	64.932	72.535

Post Hoc Tests
Child's with multiple disabilities Type of Disabilities

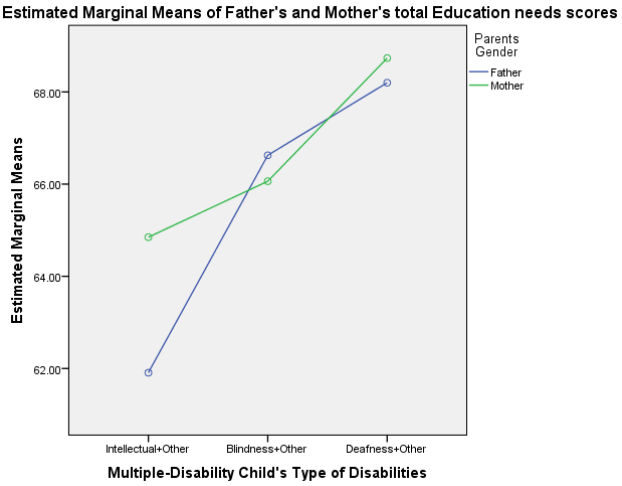
Multiple Comparisons

Dependent Variable: Father's and Mother's total Education needs scores
Bonferroni

(I) child with multiple disabilities Type of Disabilities	(J) child with multiple disabilities Type of Disabilities	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intellectual + Other	Blindness + Other	-2.9650-	1.47074	.136	-6.5177-	.5878
	Deafness + Other	-5.0879-*	1.50969	.003	-8.7347-	-1.4411-
Blindness + Other	Intellectual + Other	2.9650	1.47074	.136	-.5878-	6.5177
	Deafness + Other	-2.1229-	1.89687	.793	-6.7050-	2.4591
Deafness + Other	Intellectual + Other	5.0879*	1.50969	.003	1.4411	8.7347
	Blindness + Other	2.1229	1.89687	.793	-2.4591-	6.7050

Based on observed means.
The error term is Mean Square (Error) = 55.713.
*. The mean difference is significant at the .05 level.

Profile Plots



Appendix M

The Results of the "two Way ANOVA" of the Differences Between the Responses of the Participants According to their responses on each item of the three dimensions by Parents' Gender and Child' Type of Disability.

UNIANOVA Fathers and Mothers Financial Needs Scores BY Parents' Gender and Child' Type of disability

Univariate Analysis of Variance

Between-Subjects Factors

		Value Label	N
child with multiple disabilities Type of Disabilities	1.00	Intellectual + Other	132
	2.00	Blindness + Other	32
	3.00	Deafness + Other	30
Parents Gender	1.00	Father	97
	2.00	Mother	97

Descriptive Statistics

Dependent Variable: Father's and Mother's total Financial needs scores

child with multiple disabilities Type of Disabilities	Parents Gender	Mean	Std. Deviation	N
Intellectual + Other	Father	39.9242	4.31210	66
	Mother	39.6667	3.48329	66
	Total	39.7955	3.90681	132
Blindness + Other	Father	39.7500	2.86356	16
	Mother	40.0625	2.90904	16
	Total	39.9062	2.84389	32
Deafness + Other	Father	40.5333	4.89704	15
	Mother	40.4667	4.61158	15
	Total	40.5000	4.67385	30
Total	Father	39.9897	4.17456	97
	Mother	39.8557	3.56777	97
	Total	39.9227	3.87355	194

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Father's and Mother's total Financial needs scores

F	df1	df2	Sig.
.646	5	188	.665

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + Child Type of disability + Parents Gender + Child Type of disability * Parents Gender

Tests of Between-Subjects Effects

Dependent Variable: Father's and Mother's total Financial needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	15.148[a]	5	3.030	.198	.963	.005	.989	.096
Intercept	200230.485	1	200230.485	13067.461	.000	.986	13067.461	1.000
Child Type of disability	12.144	2	6.072	.396	.673	.004	.793	.113
Parents Gender	.000	1	.000	.000	.996	.000	.000	.050
Child Type of disability * Parents Gender	2.133	2	1.066	.070	.933	.001	.139	.060
Error	2880.692	188	15.323					
Total	312097.000	194						
Corrected Total	2895.840	193						

a. R Squared = .005 (Adjusted R Squared = -.021-)

b. Computed using alpha = .05

Estimated Marginal Means

1. child with multiple disabilities Type of Disabilities

Dependent Variable: Father's and Mother's total Financial needs scores

child with multiple disabilities Type of Disabilities	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Intellectual + Other	39.795	.341	39.123	40.468
Blindness + Other	39.906	.692	38.541	41.271
Deafness + Other	40.500	.715	39.090	41.910

2. Parents Gender

Dependent Variable: Father's and Mother's total Financial needs scores

Parents Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Father	40.069	.496	39.091	41.047
Mother	40.065	.496	39.087	41.043

3. child with multiple disabilities Type of Disabilities * Parents Gender

Dependent Variable: Father's and Mother's total Financial needs scores

child with multiple disabilities Type of Disabilities	Parents Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Intellectual + Other	Father	39.924	.482	38.974	40.875
	Mother	39.667	.482	38.716	40.617
Blindness + Other	Father	39.750	.979	37.820	41.680
	Mother	40.063	.979	38.132	41.993
Deafness + Other	Father	40.533	1.011	38.540	42.527
	Mother	40.467	1.011	38.473	42.460

Post Hoc Tests
Child's with multiple disabilities Type of Disabilities

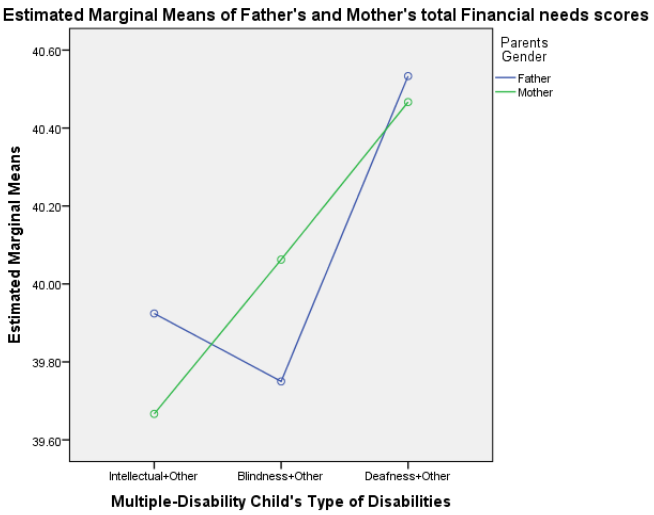
Multiple Comparisons

Dependent Variable: Father's and Mother's total Financial needs scores
Bonferroni

(I) child with multiple disabilities Type of Disabilities	(J) child with multiple disabilities Type of Disabilities	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intellectual + Other	Blindness + Other	-.1108-	.77131	1.000	-1.9740-	1.7524
	Deafness + Other	-.7045-	.79173	1.000	-2.6171-	1.2080
Blindness + Other	Intellectual + Other	.1108	.77131	1.000	-1.7524-	1.9740
	Deafness + Other	-.5938-	.99479	1.000	-2.9967-	1.8092
Deafness + Other	Intellectual + Other	.7045	.79173	1.000	-1.2080-	2.6171
	Blindness + Other	.5938	.99479	1.000	-1.8092-	2.9967

Based on observed means.
The error term is Mean Square (Error) = 15.323.

Profile Plots



Appendix N

The Results of the "two Way ANOVA" of the Differences between the Responses of the Participants According to their responses on each item of the three dimensions by Parents' Gender and Child's Type of Disability.

UNIANOVA Fathers and Mothers Social needs scores BY Parents' Gender and Child' Type of disability

Univariate Analysis of Variance

Between-Subjects Factors

		Value Label	N
child with multiple disabilities Type of Disabilities	1.00	Intellectual + Other	132
	2.00	Blindness + Other	32
	3.00	Deafness + Other	30
Parents Gender	1.00	Father	97
	2.00	Mother	97

Descriptive Statistics

Dependent Variable: Fathers' and Mothers' total Social needs scores

child with multiple disabilities Type of Disabilities	Parents Gender	Mean	Std. Deviation	N
Intellectual + Other	Father	70.1970	10.01110	66
	Mother	75.0455	9.12213	66
	Total	72.6212	9.84578	132
Blindness + Other	Father	72.3125	9.72090	16
	Mother	78.0000	5.84237	16
	Total	75.1563	8.40165	32
Deafness + Other	Father	74.6000	9.27208	15
	Mother	76.5333	6.83339	15
	Total	75.5667	8.06304	30
Total	Father	71.2268	9.89266	97
	Mother	75.7629	8.35261	97
	Total	73.4948	9.41020	194

Levene's Test of Equality of Error Variances[a]

Dependent Variable: Fathers' and Mothers' total Social needs scores

F	df1	df2	Sig.
2.074	5	188	.070

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.[a]

a. Design: Intercept + Child Type of disability + Parents Gender + Child Type of disability * Parents Gender

Tests of Between-Subjects Effects

Dependent Variable: Fathers' and Mothers' total Social needs scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	1380.421[a]	5	276.084	3.304	.007	.081	16.519	.891
Intercept	691286.423	1	691286.423	8272.517	.000	.978	8272.517	1.000
Child Type of disability	317.849	2	158.924	1.902	.152	.020	3.804	.392
Parents Gender	538.684	1	538.684	6.446	.012	.033	6.446	.714
Child Type of disability * Parents Gender	64.634	2	32.317	.387	.680	.004	.773	.112
Error	15710.074	188	83.564					
Total	1064980.000	194						
Corrected Total	17090.495	193						

a. R Squared = .081 (Adjusted R Squared = .056)

b. Computed using alpha = .05

Estimated Marginal Means

1. child with multiple disabilities Type of Disabilities

Dependent Variable: Fathers' and Mothers' total Social needs scores

child with multiple disabilities Type of Disabilities	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Intellectual + Other	72.621	.796	71.052	74.191
Blindness + Other	75.156	1.616	71.968	78.344
Deafness + Other	75.567	1.669	72.274	78.859

2. Parents Gender

Dependent Variable: Fathers' and Mothers' total Social needs scores

Parents Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Father	72.370	1.158	70.086	74.653
Mother	76.526	1.158	74.243	78.810

3. child with multiple disabilities Type of Disabilities * Parents Gender

Dependent Variable: Fathers' and Mothers' total Social needs scores

child with multiple disabilities Type of Disabilities	Parents Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Intellectual + Other	Father	70.197	1.125	67.977	72.417
	Mother	75.045	1.125	72.826	77.265
Blindness + Other	Father	72.313	2.285	67.804	76.821
	Mother	78.000	2.285	73.492	82.508
Deafness + Other	Father	74.600	2.360	69.944	79.256
	Mother	76.533	2.360	71.877	81.189

Post Hoc Tests
Child's with multiple disabilities Type of Disabilities

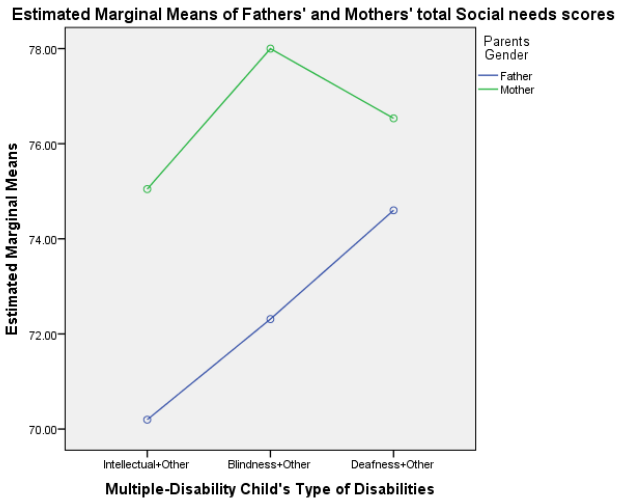
Multiple Comparisons

Dependent Variable: Fathers' and Mothers' total Social needs scores
Bonferroni

(I) child with multiple disabilities Type of Disabilities	(J) child with multiple disabilities Type of Disabilities	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Intellectual + Other	Blindness + Other	-2.5350-	1.80123	.483	-6.8861-	1.8160
	Deafness + Other	-2.9455-	1.84893	.338	-7.4117-	1.5208
Blindness + Other	Intellectual + Other	2.5350	1.80123	.483	-1.8160-	6.8861
	Deafness + Other	-.4104-	2.32311	1.000	-6.0221-	5.2013
Deafness + Other	Intellectual + Other	2.9455	1.84893	.338	-1.5208-	7.4117
	Blindness + Other	.4104	2.32311	1.000	-5.2013-	6.0221

Based on observed means.
The error term is Mean Square (Error) = 83.564.

Profile Plots



Appendix O

IRB Approvals from the University of Louisville

UNIVERSITY OF LOUISVILLE

Human Subjects Protection Program Office
MedCenter One – Suite 200
501 E. Broadway
Louisville, KY 40202-1798
Office: 502.852.5188 Fax: 502.852.2164

DATE: May 05, 2016

TO: Bibhuti K Sar, PhD

FROM: The University of Louisville Institutional Review Board

IRB NUMBER: 16.0416

STUDY TITLE: Educational, Financial, and Social Needs of Multiple Disabled Children's Families in Saudi Arabia

REFERENCE #: 541660

DATE OF REVIEW: 05/05/2016

IRB STAFF CONTACT: Jackie Powell, CIP
852-4101

The revised documents for the above referenced study have been received and contain the changes requested in our letter of 5/2/16. This study was reviewed on 05/05/2016 by the Chair of the Institutional Review Board (IRB) and approved through the Expedited Review Procedure, according to 45 CFR 46.110(b), since this study falls under Category 7: Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

This study was also approved through 45 CFR 46.117(C), which means that an IRB may waive the requirement for the investigator to obtain a signed informed consent form for some or all subjects if it finds either:

- That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research and the subject's wishes will govern; or
- That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

The following items have been approved:

Submission Components			
Study Document			
Title	Version Number	Version Date	Outcome
Families Needs Survey Arabic version	Version 1.0	04/24/2016	Approved
translation affadavit	Version 1.0	04/22/2016	Approved
Families Needs Survey	Version 1.0	04/22/2016	Approved
Research Protocol-Educational, Financial, and Social Needs of Families with Multiply Disabled Children	Version 1.0	04/22/2016	Approved

Revised Families Neeeds Preamble Consent Letter Arabic Version	Version 1.0	05/02/2016	Approved
Revised Families Neeeds Preamble Consent Letter English Version	Version 1.0	05/02/2016	Approved

This study now has final IRB approval from 05/05/2016 through 05/04/2017. The committee will be advised of this action at their next full board meeting.

Site Approval

If this study will take place at an affiliated research institution, such as KentuckyOne Health, Norton Healthcare or University of Louisville Hospital, permission to use the site of the affiliated institution may be necessary before the research may begin. If this study will take place outside of the University of Louisville Campuses, permission from the organization should be obtained before the research may begin. Failure to obtain this permission may result in a delay in the start of your research.

Privacy & Encryption Statement

The University of Louisville's Privacy and Encryption Policy requires such information as identifiable medical and health records: credit card, bank account and other personal financial information; social security numbers; proprietary research data; dates of birth (when combined with name, address and/or phone numbers) to be encrypted. For additional information: http://security.louisville.edu/PolStds/ISO.PS018.htm.

Implementation of Changes to Previously Approved Research

Prior to the implementation of any changes in the approved research, the investigator will submit any modifications to the IRB and await approval before implementing the changes, unless the change is being made to ensure the safety and welfare of the subjects enrolled in the research. If such occurs, a Protocol Deviation/Violation should be submitted within five days of the occurrence indicating what safety measures were taken, along with an amendment to revise the protocol.

Unanticipated Problems Involving Risks to Subjects or Others (UPIRTSOs)

In general, these may include any incident, experience, or outcome, which has been associated with an unexpected event(s), related or possibly related to participation in the research, and suggests that the research places subjects or others at a greater risk of harm than was previously known or suspected. UPIRTSOs may or may not require suspension of the research. Each incident is evaluated on a case by case basis to make this determination. The IRB may require remedial action or education as deemed necessary for the investigator or any other key personnel. The investigator is responsible for reporting UPIRTSOs to the IRB within 5 working days. Use the UPIRTSO form located within the iRIS system to report any UPIRTSOs.

Continuation Review Requirements

You are responsible for submitting a continuation review 30 days prior to the expiration date of your research study. Investigators who allow their study approval to expire have committed significant non-compliance with federal regulations. Such lapses may require reporting to federal agencies, a program audit by compliance auditors to ensure that subjects were not enrolled during the expired period, and may lead to findings of serious and continuing non-compliance if expiration were to occur a second time.

Full Accreditation since June 2005 by the Association for the Accreditation of Human Research Protection Programs, Inc.

If you have any questions, please contact the HSPPO at (502) 852-5188 or hsppofc@louisville.edu

Thank you for your submission.

Sincerely,

Peter M Quesada

Peter M. Quesada, Ph.D., Chair

Social/Behavioral/Educational Institutional Review Board

PMQ/jsp

Full Accreditation since June 2005 by the Association for the Accreditation of Human Research Protection Programs, Inc.

Appendix P

The Permission Letter from the Ministry of Education in Saudi Arabia to Conduct the Study from All Boys' and Girls' institutes.

المملكة العربية السعودية
وزارة التعليم
٢٨٠
الإدارة العامة للتعليم بمنطقة الرياض
إدارة التخطيط والتطوير

وزارة التعليم
Ministry of Education

الرقم : ٣٧١٢٢٧٠١٩
التاريخ : ١٤٣٧/٧/١٢هـ
المرفقات :

تسهيل مهمة باحث

الاسم		السجل المدني	
محمد بن عبدالرحمن بن حسين القحيز		١٠٠٨٧٣٨٥٧٥	
العام الدراسي	الدرجة العلمية	التخصص	الجامعة
١٤٣٧/١٤٣٦ هـ	دكتوراه	دراسات اجتماعية	لويزفل / امريكا
عنوان الدراسة : الحاجات التعليمية، المالية، والاجتماعية لاسر الاطفال متعددي الاعاقة بالمملكة العربية السعودية			
عينة الدراسة : أولياء أمور الطلاب .			

المكرم مدير معهد ..... وفقه الله

السلام عليكم ورحمة الله وبركاته ، وبعد:

بناء على تعميم معالي الوزير رقم ٥٥/٦١٠ وتاريخ ١٤١٦/٩/١٧ هـ بشأن تفويض الإدارات العامة للتعليم بإصدار خطابات السماح للباحثين بإجراء البحوث والدراسات ، وحيث تقدم إلينا الباحث (الموضحة بياناته أعلاه) بطلب إجراء دراسته، ونظراً لاكتمال الأوراق المطلوبة نأمل تسهيل مهمته (مقابلة الطالبات تتم من قبل الهيئة التعليمية النسائية في المدرسة).

مع ملاحظة أن الباحث يتحمل كامل المسؤولية المتعلقة بمختلف جوانب البحث ، ولا يعني سماح الإدارة العامة للتعليم موافقتها بالضرورة على مشكلة البحث أو على الطرق والأساليب المستخدمة في دراستها ومعالجتها.

شاكرين لكم وتقبلوا تحياتي..

مدير إدارة التخطيط والتطوير

سعود بن راشد ال عبداللطيف

صورة لجميع مكاتب التعليم

Appendix Q

Letter submitted to four special Education professors for checking about Arabic translation

بسم الله الرحمن الرخيم

المكرم سعادة الدكتور: .....حفظه الله

السلام عليكم ورحمة الله وبركاته،

أرسل اليكم هذا الخطاب راجياً من سعادتكم التكرم بالاطلاع على نموذج التحكيم الخاص بتدقيق صحة ترجمة عبارات الاستبانة الى اللغة العربية والمراد تطبيقها كمتطلب لأطروحة الدكتوراه الخاصة بي المعنون بـ: "الاحتياجات التعليمية والمالية والاجتماعية لأسر الاطفال متعددي الاعاقة بالمملكة العربية السعودية".
علماً بأن الدراسة تهدف الى التعرف على اهم الاحتياجات التعليمية والمالية والاجتماعية الخاصة باسر الاطفال متعددي الاعاقة المسجلين في برامج تعدد العوق في معاهد التربية الفكرية، معاهد الامل، ومعاهد النور (بنين وبنات) بمدينة الرياض بالمملكة العربية السعودية والذين تتراوح اعمارهم بين ٥ و١٨ سنة.

برفقة هذا الخطاب نسخة من الاستبانة المراد استخدامها ونموذج التحكيم للعبارات المستخدمة لقياس الاحتياجات المترجمة الى اللغة العربية. راجياً من سعادتكم مراجعة العبارات وتدقيق مدى وضوح وصحة العبارة باللغة العربية ومطابقتها للعبارة الاصلية والمكتوبة باللغة الانجليزية.
وفي الختام، كل الشكر لسعادتكم،

الباحث: محمد بن عبد الرحمن القحيز

Statements and example of Correction Form

Original English Statements	Arabic Translated Statements	Clear	Not Clear	Correction of Arabic Translated Statement if it is not Clear
I need more information to understand my multiple-disability child's disabilities.	احتاج إلى المزيد من المعلومات لفهم إعاقات طفلي متعدد العوق.			

CURRICULUM VITAE

Mohammed, A., Alkohaiz, MSW

Home
7415 Steeplecrest Cir
Louisville, KY 40222
+966557400500

E-Mail: maalko01@louisville.edu OR malkohaiz@ksu.edu.sa

Home page: http://faculty.ksu.edu.sa/ALKOHAIZ/default.aspx

PERSONAL INFORMATION:

Name: Mohammed Abdulrahman Alkohaiz.

Date of Birth: 05 July 1970.

Place of Birth: Saudi Arabia – Al-Deelm**.**

Marital status: Married and father of Abdurrahman, Lamis and Khalid.

Nationality: Saudi Arabian.

EDUCATION

PhD **GPA 3.57 / 4.0** Ph.D. of Social Work 03/21/2018	**University of Louisville** Kent School of Social Work Louisville, KY, U.S.A.
MSW, **GPA 3.10 / 4.0** Master's of Arts in Social Work 05/23/2001	**King Saud University** College of Arts Department of social studies Riyadh, Saudi Arabia
BSW, **GPA 2.97 / 4.0** Bachelor's degree in Social Work 07/15/1992	Al-Imam Muhammad Ibn Saud Islamic University College of social sciences Department of social work Riyadh, Saudi Arabia

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DISSERTATION

Title: Educational, Financial, and Social Needs of Families of children with multiple disabilities in Saudi Arabia

Committee: Bibhuti Sar (Chair, University of Louisville), Thomas Lawson (University of Louisville), Armon Perry (University of Louisville), Abdulaziz Albrithen (King Saud University), and Marie Antoinette Sossou (University of Kentucky).

RESEARCH INTERESTS

- School Social Work
- Social Work with Disabilities
- International Social Work
- Social Work with Families
- Direct Social Work Practice
- Research Methods
- Scale development in social work

TEACHING INTERESTS

- Social Work with Special Groups
- School Social Work
- International Social Work
- Macro Practice
- Research Methods

PRESENTATIONS

Faul, A.C., Lawson, T. R., D'Ambrosio, J.G., Boamah, D.A., Cotton, S., **Alkohaiz, M.**, Smith, L.D., Lewis, S.N., & Brown, L. (2014). Collaborative Teaching and Learning as a Tool to Ignite the *Spark* in students. 2014 Celebration of Teaching and Learning, University of Louisville, Delphi Center for Teaching & Learning, Louisville, KY, February 7.

RESEARCH EXPERIENCE

2013-2015	**Graduate Student Researcher,** Kentuckiana Regional Planning & Development Agency (KIPDA) *Principal Investigators Anna Faul and Tom Lawson University of Louisville* Conducted collaborative study between Kent school of social work doctoral program and KIPDA to help determine efficacy of three different KIPDA programs on older adults aging in place. Presented results and won poster award at Summer Series on Aging.
2002	**Co-Investigator**, "The effectiveness of professional practice for student guides" (supervised by Dr. Fahd Almaghlouth)
1991	**Project Coordinator**, "The needs and problems of the elderly in urban areas and the role of social work in facing these problems" (supervised by prof. Rashad Ahmed Abdel-Latif)

TEACHING EXPERIENCE

Spring, 2015	**Graduate Instructor** Introduction to Social Work - SB (SW 201) Kent School of Social Work, University of Louisville, Louisville, KY, U.S.A. This course is taught face-to-face at traditional classroom setting. Introduces students to the profession of social work, its code of ethics,

values base and commitment to social justice and working with vulnerable and oppressed groups; 30 hours service-learning requirement.

2009-2010 **Instructor**
Introduction to Social Welfare (SOC 102)
Department of social studies, College of arts, King Saud University, Riyadh, Saudi Arabia.
This course studies the meaning, content, dimension, and development of social welfare in different societies with special emphasis on manifestations of Islamic social welfare. The relation between social welfare and social work was clarified. Presentations of aspects of modern social welfare, along with an analysis of examples of social welfare in Saudi Arabian society, were presented.

2009-2010 **Instructor**
Principles of Social Work (SOC 103)
Department of social studies, College of arts, King Saud University, Riyadh, Saudi Arabia
This course introduces social work as a profession in the light of its own principles, values, and philosophy. Emphasis was on the goals of social work and its relation to social sciences. Forms, fields of interest and principles of social work, characteristics and qualities of the professional social worker and the professional values which he must possess were all studied.

2009-2010 **Instructor**
Care of Special Groups (SOC 309)
Department of social studies, College of arts, King Saud University, Riyadh, Saudi Arabia
This course studies the concept of mental disability people, the classification of retarded and disabled, and reasons for disability. Types of learning disability were discussed in detail. Rehabilitation of retarded and disabled socially and psychologically was discussed with reference to KSA

2009-2010 **Instructor**
Case Worker I (SOC 391)
Department of social studies, College of arts, King Saud University, Riyadh, Saudi Arabia
This course introduced the concept of the case-social worker, his or her principles, aims, and development being one of the basic techniques of social work. Characteristics of the professional case worker and the professional values connected with the philosophy of principles of social work were all discussed.

1994-2008 **Public School Teacher**
Primary school teacher in several schools at the Ministry of Education, Riyadh, Saudi Arabia.

1993-1994 **Public School Teacher**
Primary school teacher at the Ministry of Education, Damamm, Saudi Arabia.

WORK EXPERIENCE:

7/7/2010-	**Lecturer in Social Work**
up to now	At the College of arts, Department of social studies at King Saud University, Riyadh, Saudi Arabia.
6/15/2009-	**Teaching assistant in Social Work**
7/6/2010	At the Department of Social Studies, College of Arts, King Saud University in Riyadh.
2008	**Student Guide (School Social worker)**
	At Alwaleed bin Obadah intermediate school, at the Ministry of Education, Riyadh, Saudi Arabia.
2007	**Student Guide (School Social worker)**
	Alnoman bin Basheer primary school, Ministry of Education, Riyadh, Saudi Arabia.
2006	**Teacher and Student guide (School Social worker)**
	At Zaid bin Haritha Primary School at the Ministry of Education, Riyadh, Saudi Arabia.
1995-2005	**Primary school Teacher**
	At Zaid bin Aretha primary school, Ministry of Education, Riyadh, Saudi Arabia.
1994	**Primary school Teacher**
	At Alsafa School. at the Ministry of Education
1993	**Primary school Teacher**
	At Oqbah bin Amir School, at the Ministry of Education, Dammam, Saudi Arabia.
08/29/1992-	**Social Worker**
10/23/1993	At Al-Amal Hospital (specialized in drug addiction), Riyadh, Saudi Arabia.

SOCIAL WORK PRACTICE EXPERIENCE AND COMMUNITY SERVICE

May1990-	**BSW Field Practicum**
Jul 1990	A social worker in Riyadh Prison for children's events for three months, six hours per week in Riyadh, Saudi Arabia.
Jan1991-	**BSW Field Practicum**
May 1991	A social worker for the Islamic World League to help Kuwaiti refugees after the Iraqi invasion. For five months, I worked for the League eight hours per week in Riyadh, Saudi Arabia.
Jan1990-	**BSW Field Practicum**
Mar1990	A social worker trained at Institute of the Capital Model in Riyadh, Saudi Arabia.
Sep1989-	**BSW Field Practicum**
Nov1989	Social worker in training in the Riyadh Medical Center for three months, eight hours per week in Riyadh, Saudi Arabia.
2008-up to now	Member of the Saudi Society of Social Studies (SSSS), Riyadh, Saudi Arabia.
2010	Member of the committee for development in social section at the Department of Social Studies, College of Arts, King Saud University, Riyadh, Saudi Arabia.
2010	Member of Bachelor examinations committee at the Department of Social Studies, College of Arts, King Saud University, Riyadh,

	Saudi Arabia.
2010	Member of the committee which interviews undergraduate students for admission for the Department of Social Studies, College of Arts, King Saud University, Riyadh, Saudi Arabia.
2010	Member of the social activity committee in the College of Arts, King Saud University, Riyadh, Saudi Arabia.
Jul 2010- Aug 2010	30 hours, Collection of research data in the social work, for the Department of Social Studies, College of Arts, King Saud University, Riyadh, Saudi Arabia.
2000	Participation in social children exhibitions at the Ministry of Education, Riyadh, Saudi Arabia.
2000	Participation in the school for children's theater at the Ministry of Education, Riyadh, Saudi Arabia.

LANGUAGES

Arabic	writing, reading, speaking (Mother tongue)
English	writing, reading, speaking

CERTIFICATES & SKILLS

2013- present	**CITI and HIPPA certified**
2016- present	**CITI and HIPPA certified**
1993- 4 Weeks	**Training in "ADDICTION INSERVICE "** Alamal Hospital, Riyadh
1993 - 5 Days	**Introduction to Computer,** Arab National Bank, Riyadh
1999 - 5 Weeks	**English Language Course** Tampa, FL, USA
2002 - 3 Days	**Creative Leering for Primary School** Ministry of Education, Riyadh
2005 - 3Days	**Measurement and Evaluation (planning of test contents)** Ministry of Education, Riyadh
2005 - 3 Days	**The foundations of guidance and direction** Idad Institute for Training، Riyadh
2005 - 4 Days	**Audio pronunciation Teaching skills** Ministry of Education, Riyadh
2007 – 12 Days	**Windows 2002 (Advanced).** Computer Club, Ministry of Education, Riyadh
2007 – 15 Days	**Word 2003 and its applications.** Computer Club, Ministry of Education, Riyadh
2007 - 13 Days	**Excel 2003** Computer Club, Ministry of Education, Riyadh
2007 - 19 Days	**Maintenance of the computer.** Computer Club, Ministry of Education, Riyadh
2007 - 4 Days	**Guidance program.** Computer Club, Ministry of Education, Riyadh
2007 - 3 Days	**Case study.** Ministry of Education, Riyadh
2007 - 3 Days	**Behavior Modification Training,** Ministry of Education, Riyadh

2008 - 5 Days	**How to Deal with The Problem of Substance Abuse and Mental Disorders Among Students.** Alamal Hospital, Riyadh

CONFERENCES AND WORKSHOPS

June 21st 2013	**Couples Coping with Cancer-Related Stress: Translating Research to Practice Conference.** *The Sixth International Meeting on Stress & Dyadic Coping.* Louisville, KY
February 7th 2014	**Collaborative Teaching and Learning as a Tool to Ignite the *Spark* in Students Conference.** *2014 Celebration of Teaching and Learning.* University of Louisville, Delphi Center for Teaching & Learning, Louisville, KY.
10/28/2015	**Strategies for Writing for Publication workshop** The School of Interdisciplinary and Graduate Studies, University of Louisville
04/14/2016	**Technology for Effective Teaching workshop** The School of Interdisciplinary and Graduate Studies, University of Louisville
03/08/2016	**An Introduction to Data Sources for Graduate Student Researchers workshop** The School of Interdisciplinary and Graduate Studies, University of Louisville
02/23/2016	**Writing A Literature Review workshop** The School of Interdisciplinary and Graduate Studies, University of Louisville

REFERENCES

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Dr. Fahad H Almaghlooth Associate Professor of social work Department of social studies College of Arts King Saud University Riyadh, Saudi Arabia (00966) 505491822 Drfahd33@yahoo.com	**Dr. Jibrin. A. Aljibrin** associate professor of social work Department of Social Studies College of Arts King Saud University Riyadh, Saudi Arabia (00966) 505487132 jaljibrin@ksu.edu.sa